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An Address

ENTITLED

LOOKING BACK;

A GLANCE FROM EMPIRICISM TO EXPERIMENT, FROM SUPERSTITION TO RESEARCH.

Delivered before the Middlesex Hospital Medical Society on Nov. 11th, 1909,

BY SIR HENRY MORRIS, BART., M.A., F.R.C.S. ENG.,

EMERITUS LECTURER ON SURGERY AT THE MIDDLESEX HOSPITAL.

GENTLEMEN,—When, through the honorary secretary, your society paid me the compliment a fortnight ago to ask me to give the opening address of the session, my mind reverted to the past, to the long ago, and at once assumed the attitude of looking back.

I remembered that in my earliest days at the hospital, in the first years of the "seventies" in fact, I held the office which our chairman holds now, of President of the Middlesex Hospital Medical Society. I recalled with what satisfaction I learnt that this society, founded as it was in 1774, is one of the oldest of the medical societies in London, and I began to reflect upon the vast changes in medical opinion, in professional knowledge, and in curative science which have occurred not only since the birth of this society, but in the much shorter period since the time when I was President. And if I may state in five words the chief cause of those changes, I will make use of the expression of (I think it was) John Donne, a poet and divine in the reign of James I., and say that they are due to "*the sacred hunger of science.*" And if I were asked, "What kind of science?" I would answer, "Physical science which searches after truth by the method of experiment," that science which seeks for knowledge without first asking what direct or tangible benefit is likely to be derived from it. In the fields of research there is nothing to distinguish, at first sight, which are the profitable and which the unprofitable plots, like the interesting Babylonian landmark or boundary stone marked off the ownership of different plots of ground, and which you can now see in the British Museum. But though scientific research may start with no immediate purpose but its own, yet its hope is progress; its creed, that "knowledge is power"; and its expectation that, without asking how, yet somehow its results will ultimately be beneficial to humanity.

Leslie Stephen, in his introduction to his work on "Utilitarians," has written: "The love of truth in the abstract is one of the weakest influences in human nature." Well! Be it so. Still, "the sacred hunger of science" is keenly felt by many, and in some it would seem to be a necessity laid upon them, like the necessity to preach felt by St. Paul. And just as St. Paul exclaimed, "Yea, woe is unto me if I preach not the Gospel," so these eager investigators would in the same spirit cry out, "Yea, woe is unto us if we make not experiments."

It is by means of experiments which can be planned and controlled at the will of the explorer, and especially by experiments on living animals, that so many of the recent changes have been made in our views of the pathogenesis and diagnosis of disease, particularly of fevers and the infective diseases of wounds, as well as in our methods of treatment.

But I would not have you suppose that I regard research by experiment as of recent or modern date. It is not so, not even research by experiments on animals. Hippocrates was the first to lead medicine in the right track. He employed experiment as well as observation, and thereby succeeded in freeing medicine from the fantastic speculations of the pre-Socratic philosophers. He was, moreover, the fountain source or spring of the flowing stream of medical science, whose course, however, was soon to be checked by the dialectical and rhetorical gyrations in the whirlpool of Greek philosophy, by the pitfalls of Galenic Aristotelianism, the shifting quicksands of Scholasticism, and the deadening and paludal morass of the Middle Ages; but it came bubbling out again as little rivulets into the sunshine of the Renaissance, acquired force and volume by the Reformation, and flowed onwards unchecked and in full stream through the smooth and level plains beyond the Revolution; there it is bounded only by the horizon, the clouds and darkness of which are steadily being pierced, dissolved, or made to recede by the penetrating rays of the lime-lights of modern methods of research.

Galen, notwithstanding the obstacles he raised, by his mistaken and misleading worship of Aristotle, to the progress of medicine for a period of nearly 1500 years, nevertheless asserted the importance of anatomy—though, unfortunately, he only knew anatomy through the dissection of animals and not of the human subject; and he was the parent of experimental physiology.

Towards the middle of the seventeenth century Descartes made great use of vivisection, and the recluses of Port Royal—some of the most learned philosophers and educationists of their time—resorted to dissection of living dogs and other animals to demonstrate the circulation of the blood; and were accused, possibly as unjustifiably as the scientists of to-day, of being indifferent to the cries of their victims.

In other departments of physical science recourse was had in the past centuries to experiments. Bacon, in his "Natural History," describes the importance of making experiments, and indicates a very large number. Pascal, about the year 1648, made most important and decisive experiments on the weight of air, experiments which, according to Sir John Herschel,[1] "tended more powerfully than anything else which had previously been done in science to confirm in the minds of men that disposition to experimental verification which had scarcely yet" (he was writing in 1830) "taken full and secure root."

Boyle, in the middle of the seventeenth century, instituted exact experiments into the relation between colour and heat, and thereby laid the foundation for the union of optics and thermotics; he also advanced the science of hydrostatics, and established chemistry on a real basis as a science capable of dealing with the organic world. Boyle constantly insisted on two fundamental principles—namely, (1) the importance of individual experiments; and (2) the comparative unimportance of the teaching of antiquity on physical science. He inherited, so to speak, these opinions from Bacon—"First to doubt, then to inquire, and then to discover." Boyle's propensity to doubt is evident throughout his writings, and he gave to his essay on crystals the title "Doubts and Experiments Touching the Curious Figures of Salts."

The determination to subordinate old notions to new inquiries was emphasised in Boyle's lifetime by the incorporation in 1662 of the Royal Society, which was formed with the avowed object of increasing knowledge by direct experiment. According to Dr. Paris ("Life of Sir Humphry Davy") the Charter states that the society was established for the improvement of natural science, and that this epithet *natural* was introduced in contra-distinction to *supernatural*, because at that period the arts of witchcraft and divination were very extensively encouraged.

In the eighteenth and nineteenth centuries experimental research was very rich in discoveries. Research by experiment has been enormously advanced and extended by chemistry, photography, the improvement in instruments, and other means. Animal chemistry has been of the greatest assistance to the physiologist and pathologist, as have the microtome to the histologist and embryologist, and the microscope to the biologist and bacteriologist.

The microscope was essential for experiment as well as for observation. By its aid it was ascertained that the organisation of vegetables is nearly as complicated as that of animals, that there is harmony between the animal and vegetable kingdoms, and a close relationship between the physiology of plants and animals. Without the microscope bacteriology would have been impossible, and some of the greatest developments of scientific research would never have been brought about, except by the help of microscopes of high powers. Though the microscope in its crudest form was invented so long ago as 1590, and was exhibited in London in 1620 by Drebbel, it was only by slow degrees that it reached its present state of perfection. Improvements are still in progress, and only the other day a demonstration of a new invention was given at the Academy of Sciences of

[1] On the Study of Natural Philosophy.

Paris. It consists of photography, by kinematograph, of microscopic images obtained by side-lights, which constitutes the ultra-microscope. By this combination of kinematograph, microscope, and side-lights, photographs are obtained showing microbes, so small as to be invisible to the eye under the ordinary illumination and microscope, moving in their natural surroundings. By magnifying, the microbes of sleeping sickness are seen twisting about among the red cells of the blood, and are said to appear as large as eels.

Specialism, in spite of certain definite drawbacks, has unquestionably been another cause of advance in medical science. Medical science, in common with industries and other branches of science, has made remarkable progress in accuracy, as well as in extent of knowledge, through the experience and investigations of those who have specialised in various departments.

In the past one of the great obstacles to the advance of medicine was the tenacity of unproven hypotheses. By experimental methods of research the truth or falsity of hypotheses is tested, in many instances very quickly, before they are either accepted as explanations of symptoms or put into practice in treatment. Experiment is like cross-examination—it unravels the essential from the unessential, the relevant from the irrelevant; it insists on direct answer to the question asked. By experiments properly controlled we obtain results on which we can reliably base opinion and form absolute beliefs. This certainty, this absolute belief, is a matter of the utmost importance to us in the practice of our profession. Our object in the treatment of disease is to act, and our desire is to act successfully. And this desire to act successfully is the keynote of all actions; it is one of the ultimate facts of human nature. But human nature, as James FitzJames Stephen[2] states, is so constituted that all actions involve belief, and all successful action involves true belief; and to attain to true belief every source of error must be eliminated, every doubt or uncertainty removed.

In the exercise of our curative science we want our results to be as far as possible *certain*. The conditions necessary for unerring action are first to know what should be done, and second to have the mind to do it. We should like in all cases to be able to say with Hamlet:

> "Seems, Madam! Nay, it is. I know not seems."

In respect to many diseases and injuries, the safeguards of experimental research have obtained for us this certainty, and we can put our treatment into practice with the full assurance that we are taking the direction of success, though, even so, of course, we cannot always command success, for the reason that we have to war against disease and death, and death we know is the lot of all:

> "All that live must die,
> Passing through nature to eternity."

But our deservedly high appreciation of experimental research must not dull our sense of the great value of clinical and post-mortem observation. The laboratories are so full of promise, such a land flowing with the milk and honey of prospective discoveries—far off it may be, but yet so rich—that there is some risk that they may monopolise attention. The wards and the post-mortem theatre also yield products, not a few and by no means unimportant or insignificant. The acute and minute observation, quite apart from experiments, of trained clinicians and pathologists has resulted in the discovery of many facts of first-rate importance, and the generalisations therefrom have yielded sound and guiding principles of diagnosis and treatment. Thus have become famous the names of Morgagni and Rokitansky, of Sydenham and Boerhaave, of Watson and Murchison, of Hilton and Paget, of Wilks and Gull, of De Morgan and Charles Moore, and many others.

Percussion and auscultation, the stethoscope and thermometer, the ophthalmoscope, the laryngoscope, and other instruments for illuminating parts and cavities of the body have increased the means and the efficiency of clinical examination and diagnosis.

The importance of developing the faculty of observing cannot be exaggerated. Every medical student, every medical practitioner, can and ought to cultivate it. At all times and in all places it can be exercised; whereas experimental research requires special and often elaborate conditions and equipment. Moreover, we all cannot give up the time from our particular lines of work which experimental research demands, and not everyone is endowed with the qualifications requisite to pursue it successfully; so that many, the majority in fact, must be content to employ the knowledge acquired by the experimental work of others. Observation, it is true, compared with experiment, is very slow, and is like the crawl of the tortoise in contrast with the strides of the ostrich, but it improves with practice, ripens with age, and the coördination of collective observation increases experience and expedites conclusions.

> "Experience is by industry achieved
> And perfected by the swift course of time."

In my recent "Sir William Mitchell Banks" lecture I showed how the modern operations for cancer of the breast have been established by the careful observations, of clinical phenomena, and of the facts of morbid anatomy, made in this hospital by Moore and De Morgan, and which have been confirmed quite recently by Mr. Handley.

Another illustration of the brilliant results of individual and collective observation is the discovery of the association of myxœdema with the loss of the thyroid gland, thence followed modifications in the operative treatment of the thyroid, and the prevention and cure of myxœdema by the administration of thyroid extract. I am, however, aware that these results connected with the thyroid are sometimes, but unjustly, claimed as a triumph exclusively of experimental research.

The enormous strides made by scientific researches afford reason to expect that the so-called systems of medicine such as those associated with the names of Hoffmann, Brown, Cullen, and others, each of which is based upon the idea of finding an explanation for every form of disease, have vanished for all time.

At the present time, however, quackery is rife in Germany in the form of the "natural" treatment (*Naturheilkunde*), and in this country and America in the form of Christian Science. We are much indebted to Mr. Stephen Paget for his instructive book and his recent address on Christian Science, but there is one aspect which he has not gone into, and on which it is impossible to speak without trespassing beyond the bounds within which it is usual to limit discussion on medical subjects; yet it is with reference to this aspect that I crave your attention for some minutes. The teaching and practice of Christian Science ignore all the physical reality of sickness set aside all the recognised means of curative science, and rely entirely on an appeal to "*the source of life, for more life.*" Its method is to call on the Divine Spirit by means of concentrated thinking, and by thus drawing upon "spiritual force" to remove an *idea of disease*, the disease itself being said to have no actual or real existence.

In theory Christian Science healing differs from Faith healing in this: Faith healers do not doubt the reality of disease and suffering, but believe that the Spiritual and Divine force neutralises and counteracts them; whereas the Christian Scientists deny entirely the existence of a body or of pain and sickness, and profess to call down the Divine influence to overcome a false idea—a misimpression. Like the saints of old, Mrs. Eddy and her followers claim the true source of their cures to be the direct action of God. Such a claim, if not put forward in so many words, is *de facto* a claim to be able to work miracles, and none the less so because they talk and write in psychological manner of the "power of an idea" and the "annihilation of an illusion." A miracle is defined as a plain and manifest exercise by the agency of man (including prayer and contemplation under the term agency), or by God at the call of man, of those powers which belong only to the Creator and Lord of Nature. I purposely omit from this definition any reference to *signality*. The reason for considering miracles as signs is based on the Greek word σημεῖον, of which "miracle" is the ordinary translation, and from which the word semeiology, meaning a knowledge of the signs and symptoms of disease, is derived.

The Christian Scientist cannot get away from the fact that, on his own showing, he thus attempts to work miracles. It is to the purpose therefore to criticise the "cult" from this point of view. The miracles of which we have authentic record are (1) those of the New Testament; (2) those of the Old Testament; and (3) the miracles of the Early Christian Church—the so-called ecclesiastical miracles. The miracles attributed to the Roman Emperor Vespasian

[2] General View of the Criminal Law of England.

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are no doubt pure fabrications and Mahomed's miracles read like sleight of hand and jugglery.

The miracles of the New Testament were performed (*a*) by Christ himself; (*b*) by the Apostles; and (*c*) by the Disciples. There is no difficulty in showing that Christian Science departs in four important particulars from the miracle working described in the New Testament. The points of difference I refer to are that the Christian Scientist (1) requires faith or self-confidence in the patient; (2) attributes therefore insufficient importance to the faith or "mental concentration" of the healer himself or herself; (3) refuses to employ any physical means of treatment; and (4) is unable to perform certain acts which, we are explicitly told, could be done by those who worked miracles under the Christian dispensation.

Many of the New Testament miracles were those of *healing;* those of the woman cured of an issue of blood, the leper cleansed of his leprosy, and the blind men restored to sight by mere touch, were performed by Christ himself on persons who were told their faith had made them whole; those of the widow's son, Jairus' daughter, and the son of "one of the multitude" seen after the transfiguration, were wrought by Christ through the faith of the parents of the afflicted. The centurion's servant was cured of the palsy through the faith of the centurion, which was said to have been greater than any which had been found even in Israel.

I. In neither of these four last-named cases was there any coöperation on the part of the individuals restored to health. In the performance of the miracles wrought upon them they were purely passive agents. Christian Science, on the other hand, requires an effort of contemplation or mental concentration, of will power, or of faith, on the part of the patient to be cured. She cannot, however, appeal to the New Testament for support of this teaching, for besides the instances of the substitution of the faith of another for that of the person who was the subject of the miracle, there were other miracles in which there was no such substitution. Neither the man blind from his birth, nor the nine lepers, nor the man with the legion of devils, are stated to have exhibited faith by prayer or otherwise before or during the accomplishment of the miracle. Nor did any other person do so on their behalf. In the case of the cripple of Lystra, St. Paul, "steadfastly beholding him and perceiving that he had faith to be healed," cured him. The cripple had heard Paul speak, but he had made no appeal or sign or personal effort to be healed. St. Peter healed the lame man at the gate of the Temple, cured Æneas of Lydda of the palsy, and restored Dorcas, *alias* Tabitha of Joppa, to life; but there was no coöperation on the part of those treated. The miracles of Philip and Stephen testify apparently to the same fact, for being "full of faith and power" themselves, they "did great wonders and miracles among the people."

Thus, though Christian Scientists are able to refer in support of their own method of "absent treatment" or *healing in absentiâ* to the single instance of the centurion's servant, there are many cases recorded in which there was no coöperation or participation in thought-concentration on the part of the patients themselves. Is it not therefore effrontery on their part to ascribe their failures to the patients' defective capability of thinking, or deficient force of will, or want of faith?

II. In the cures which were wrought by the Apostles and Disciples the faith of the active agent (i.e., the Apostle or Disciple) was of primary importance—in fact an essential factor for the healing. When an explanation was sought of the failure of the Disciples to cure the epileptic and lunatic boy, the reply was, their unbelief. On the other hand, the 70 disciples who were sent, two and two, into every city and place, were believers. They returned from their journeyings with joy, proclaiming "Even the devils are subject unto us through thy name." Further, there is the reply to the Apostles about the grain of mustard-seed and the sycamine tree, when they asked "Increase our faith." Is not the correct argument from analogy, therefore, that when the Christian Scientists fail it is on account of their own deficiencies—of their own lack of power?

III. Nor can they justify by New Testament teaching their own rejection of every kind of physical aid in their treatment of the sick. In the case of the man blind from his birth, Christ made clay with his spittle, and after anointing the eyes of the blind man with the clay, sent him to wash in the pool of Siloam. Repeated stress is, in the narrative, laid on the clay and the washing. Again, we are told "God wrought special miracles by the hand of Paul, so that from his body were brought unto the sick handkerchiefs or aprons, and the diseases departed from them, and the evil spirits went out of them."

IV. It has been held that the power of working miracles was transmitted to the Apostles and Disciples in such a manner that it came necessarily to an end on the death of the last of the Apostles.[3] If they dispute this, are the Christian Scientists prepared to base their self-confidence as healers on the only passage in the Bible which it is said gives any support to the idea that miracles are in these days performed, and have been possible throughout all the ages of the Christian Church? The passage is, "And these signs shall follow them that believe. In my name shall they cast out devils; they shall speak with new tongues; they shall take up serpents; and if they drink any deadly thing it shall not hurt them; and they shall lay hands on the sick, and they shall recover."[4]

If the laying on of hands is part of the healing, how do the Christian Scientists justify their attempts on patients at a distance? And why do they restrict themselves to the exercise of the healing power only, and disregard all the other endowments specified in the text? Do they speak with new tongues? Could they take up serpents or drink deadly things and yet remain unharmed? Would they take, say, concentrated laurel-water instead of claret for dinner, or eat aconite root instead of horse-radish with roast beef? Why do they not give demonstrations in their churches or temples of the impunity with which they can manipulate venomous snakes and serpents?

When St. Paul, after escaping drowning from shipwreck, was being kindly entertained by the inhabitants of Malta, a viper came out of a bundle of sticks and clung to his hand. The people at once supposed he was a murderer, and that vengeance had overtaken him in spite of his escape from the sea. But when he shook the beast off into the fire and suffered no harm the people changed their minds and thought he was a god. Why do not the Christian Scientists increase the evidences of their power, and improve the estimation in which they are held, by showing in the manner of St. Paul how unmerited are the imputations of manslaughter against them?

It was foretold that sorcerers and false prophets would arise who would declare signs and wonders, insomuch that if it were possible they would deceive the very elect. Was Christian Science included in this anticipation? When in 56 A.D. the seven sons of Sceva, the Jew of Ephesus, and other "vagabond Jews and exorcists" made trial of their power of healing, the evil spirit answered them by saying, "Jesus I know, and Paul I know, but who are ye?" And then the man in whom the evil spirit was leaped on Sceva's sons and overcame them, and prevailed against them so that "they fled out of the house naked and wounded." There are, not a few, persons who, knowing the fatal consequences attending the practice of the Christian Scientists would witness without disturbance to their bowels of compassion the advent of a spirit which would chastise those presumptuous persons as Sceva's sons were treated.

The Pharaoh of 3400 years ago called together the wise men, the sorcerers, and the magicians of Egypt, to practise their enchantments and to cast down every man his rod, and they became serpents. But the rod of Aaron swallowed up the rods of all of them. Would it be altogether a misfortune if modern science or public spirit, or both, like Aaron's rod, would swallow up the disciples of Mrs. Eddy?

It was commanded in old time to forbid no man to do miracles in the name of the Master, nor would we quarrel with the Christian Scientists for trying their minds on miracles if they did no harm to others thereby. Our repugnance to their presumption is because they mislead the credulous, the ignorant, and the helpless into supposing that miracles will be wrought at their instigation, and thereby persuade, if they do not indeed enforce, their victims to neglect every physical means for their recovery. We are not concerned as medical men with the metaphysics of Christian Science. What we resent is the effect of their teaching and practice in cases of organic and infective diseases, and in severe surgical injuries. It is because of their meddling with medicine, not their muddling with

[3] Smith's Dictionary of the Bible.
[4] Mark xvi. 17, 18.

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metaphysics, that our profession, in the interest of sufferers and in the interest also of the general public, opposes their false doctrine and cries out against their cruel and fatal practice.

The miracles of the Old Testament formed part of the Theocratic government of the Jews, and were wrought for the purpose of impressing an ignorant and semi-barbarous people with the idea of the power of the Deity. To us the striking feature about many of them is the thinness of their veil of the marvellous. As miracles they seem beggared of the miraculous. They were, however, quite sufficient to terrify and excite the wonder of a semi-civilised race whose simple rudiments of learning made them as "children" in the condition of "slaves." For instance, Samuel called to the Deity for thunder and rain during wheat harvest so that the people might realise their wickedness; and the thunder and the rain came. This brings back to my thoughts a circumstance related, I think, in "She," or some other book by Rider Haggard. Some one, knowing that an eclipse of the sun was due on a particular date, saved himself from being put to death by publicly foretelling the approaching darkness, and thus leading the natives to fear him as a god or a prophet. There are many nowadays who foretell, like Samuel, what the weather is going to be; such predictions are a part of the news supplied to us by the daily and weekly press. Besides, we offer prayers in churches still for sunshine or showers, and sometimes the rain or the fine weather as the case may be comes as a *post hoc*, if not as a *propter hoc*.

Then there is the cure of King Hezekiah, who was "sick unto death" from the effects of a boil, but whose life was saved by his own tears and prayers and through Isaiah, who prescribed "a lump of figs" to be applied to the boil. No one in these days, however, would think it wonderful that a fig poultice should bring away the core of a ripe boil in three days.

There is little to venerate or respect in the miracles of the saints of the second, third, and fourth centuries. The miracle associated with the career of St. Ambrose in the fourth century looks like imposture and gullibility. At a time when his influence was on the wane and required vigorous support St. Ambrose had a dream, which led to finding beneath the pavement of the church the remains of two martyrs. The common people crowded to see these venerable relics, and many who were sick were healed by touching the bones. St. Ambrose was in ecstasies over these miraculous cures, and preached eloquent sermons thereon. This was but a poor and vulgar imitation, however, of the miracle of the man who, when about to be buried, was thrown into the sepulchre of Elisha, and came to life immediately his body touched the bones of the prophet.

The tactics of St. Ambrose remind us of the miraculous cures which were worked on the fanatics at the tomb of the Jansenist deacon, François de Paris (Abbé de Paris), in 1730; they also recall the procession of the multitudes one has seen at Lourdes; and the filthy fragments of dressing and the discarded sticks and crutches ostentatiously thrown into the hedgerows near the shrine of miraculous cures, in the South of Ireland. The cemetery of St. Médard in Paris where François was buried became so overrun with pilgrims that the place of the grave was walled up; hence arose the satirical epigram: "De par le Roi defense à Dieu de faire miracle en ce lieu."

All the Ecclesiastical miracles are highly improbable. They resemble those fictitious legends, those mists of error, which have been invented by the imagination of impostors for acceptance by the credulous, to some of which I will in a moment refer.

In B.C. 280 there arose in Alexandria a medical sect known as the "Empirical School." Its members relied solely on tradition, analogy, and individual experience, and rejected all philosophical theories, and all *a priori* reasoning. The term "empiric" in the present day is sometimes given to quacks—i.e., those who practise medicine or surgery, but who have not received a regular medical training. More commonly it is the name applied to qualified men, who rely on tradition and personal experience. By such, anatomy and physiology are considered to have but little connexion with practice, the whole object of the art and science of medicine in their view being to obtain practical results by therapeutical agents, to search out specifics for every malady, and to cure disease without troubling to discover its true pathology and pathogenesis. It was empiricism of this kind which laid our profession so much open to the charge of charlatanry, and was one of the reasons why it excited the scorn and satire of such men as Petrarch, Montaigne, and Molière.

Empiricism has had its professors in all countries and in all ages since the days of the Alexandrian School. Suetonius relates that the life of Augustus Cæsar was saved by the physician Antonius Musa, who insisted that hot medicines, in his experience, were the only remedies for the disease from which Cæsar was suffering; all the rest of his doctors had thought the same about cold medicines. Herodotus tells that the Lybians professed that persons were prevented from having catarrh for the rest of their lives if the veins of the head and temples had been burned and cauterised when they were four years old. Galen reported a case to prove that leprosy was cured by wine drunk out of a vessel into which a viper had crawled.

Montaigne, the earliest systematic sceptical writer in the French language, published at the end of the sixteenth century an amusing but satirical essay on physic and physicians. He mentions many of the empirical remedies then in use, such as "the left foot of a tortoise, the urine of a lizard, the dung of an elephant, the liver of a mole, and blood drawn from under the right wing of a white pigeon." Montaigne comments at some length on his own sufferings from stone in the bladder. He avoided being treated by physicians, and no wonder, for he adds, "and for us who have the stone, so scornfully do they use us in our miseries" that they prescribe "the excrements of rats beaten into a powder." He learnt the fallacy of the idea that the blood of a he-goat was a remedy for stone by having one killed and finding stones within its body. From Montaigne's own account, however, it is clear they were not urinary calculi but bezoars, which are not uncommon in the stomachs of goats, antelopes, and other animals, and which formerly were esteemed as antidotes to all poisons.

Montaigne illustrates what he describes as "the variety and weakness of the rationale of the profession," by citing the reasons given by one set of physicians why aperitive medicines are proper for persons subject to the stone, and the reasons given by another set why aperitive medicines are dangerous to those same persons, by tending "to create gravel, and to occasion a certain and most painful death." Here in this hospital public opinion has required us to try numerous purely empirical drugs for cancer, such as chian turpentine, condurango root, violet leaves, molasses, and others—all as entirely without curative effect as the repulsive things mentioned by Montaigne.

Under Arabian and other Oriental influences medicine became mixed up with magic, alchemy, and astrology; and in the Middle Ages it came under the yoke of theological dogma, and was enslaved by superstition. The influence of superstition continued long, and, though scotched, is not even yet killed. The practice of touching as a cure for scorbutic diseases was exercised by all our Sovereigns from Edward the Confessor to the time of Queen Anne, and was especially prevalent in the reign of Charles II. Though it is unfair to the memory of the illustrious physician of Norwich, Sir Thomas Browne, to quote him in illustration of the superstitions which prevailed in his day, without mentioning that in a subsequent work published 12 years later he deliberately attacked them as "Vulgar and Common Errors," it is nevertheless true that in "Religio Medici," published in 1634, he declared his belief in the philosopher's stone, in witches, in palmistry, and in spirits and tutelary angels, and he rated those who denied the existence of witches as atheists and "worse than infidels."

A custom called "La Couvade" formerly prevailed in the south-west part of France, and very widely, too, in other parts of the world, which obliged the husband of a lying-in woman to go to bed and take charge of the baby. It was he who received the congratulations of his friends, in bed; whilst the mother got up and went about her business in the house, as if nothing had happened. Remains of this custom are said to exist among different races even at the present day—namely, in Corsica, Guiana, Borneo, and elsewhere. The explanation used to be that the father had to expiate original sin; but of late it has been held that he was put to bed to be out of the way for fear that, if he were going about as usual, by some unintentional act he might injure the baby, not physically, but through the spirit.

It was at one time taken for granted in Christian countries, and the view is said to have been sanctioned by Luther,

that hail and wind were the works of wizards. Combe, in his "Constitution of Man,"[5] relates that in the middle of the eighteenth century the country west of Edinburgh was so unhealthy that every spring the farmers and their servants were seized with fever and ague, and that these visitations were believed to be sent by Providence. After a while the land was drained and the fever and ague disappeared.

Swinburne, in his "Travels through Spain (1775–1776),"[6] tells that the clergy in the latter part of the eighteenth century were on the point of putting an end to the opera because they attributed the want of rain to the influence of that ungodly entertainment.

In 1760 the physicians of Madrid opposed the cleansing of the streets of the city, as they considered the smells emitted from them were wholesome. The argument was that "the air being sharp and piercing it was extremely probable that bad smells made the atmosphere heavy, and in that way deprived it of some of its injurious properties." But Spain was a particularly backward country, for Townsend during his journey through Spain in 1792 found that the leading physician of the country doubted the truth of the circulation of the blood, which Harvey had proved 150 years before. Even in the beginning of the nineteenth century there was not a lecture room for practical instruction in the colleges of either Madrid, Barcelona, or Cadiz.

As long as it was forbidden to question the teaching of the Church physical science made but slow progress, scientific investigation was under great restraint, and scientific investigators were frequently punished as heretics. As long as periodic attacks of fever and ague were believed to be visitations sent by God it was heresy to make efforts to prevent them. As long as a lengthy period of drought was regarded as a Divine punishment for indulgence in ungodly amusements it was conceivable that the closure of the theatres and opera houses might bring down the gentle rain from heaven as well as the drop-curtain of the stage. But as soon as fever and ague disappeared with effectual drainage, it was possible to realise that the cause of these diseases was the stagnant state of the land, and not the vengeance of an offended Deity. And when the rainfall, which at one time makes the corn grow, and at another ruins the crops before they can be garnered up by the farmer, is ascertained to be a necessary consequence of other antecedent occurrences, and its variations are brought under known laws of Nature, then probably the prayer for rain will be expunged from our Prayer Books and Church Services.

In 1853 a severe epidemic of cholera spread over this country and was very destructive in Scotland. The clergy, supported by the people of Scotland, applied to the Home Secretary to know if the Queen would appoint a day for a national fast, which was the most effectual way in their judgment of propitiating the Deity to stay such a terrible pestilence. This view was in accord with the superstitious fancies as to the origin of disease then prevalent in Scotland, and which were once almost universally cherished alike by Pagans, Catholics, Protestants, and Presbyterians throughout the world. Lord Palmerston, the Home Secretary at the time, had the courage to set at defiance such narrow notions. On behalf of the English Government he informed the Presbytery of Edinburgh "that the affairs of this world are regulated by natural laws, on the observance or neglect of which the weal or woe of mankind depends," and he advised that it was better to cleanse than to fast, and that under the circumstances activity was preferable to humility. He urged that efforts should be made to destroy the causes of disease by improving the dwellings and other conditions of the poor. If this were done he doubted not that all would go well, otherwise pestilence would be sure to revisit them, "in spite of all the prayers and fastings of a united but inactive nation." The action of Lord Palmerston showed the triumph of common sense over prejudice; of practical wisdom over ignorant helplessness; of science over the old theological, as distinct from religious spirit, which formerly made martyrs of scientific men by persecution and sometimes by death.

In the half-century which has elapsed since the correspondence just referred to between a member of the British Government and the heads of the Scottish Presbyterian Church, science has made a progress unparalleled in any previous period. At that date the continued fevers, and diphtheria, erysipelas, pyæmia, septicæmia, and other septic diseases were ever present mysteries. Their immediate causes were unknown, their treatment tentative and uncertain, their prophylaxis of the most general and miscellaneous character. To-day all is changed. The cause of cholera is sought for amongst the microbes, and the majority of infective diseases have been proved to be due to the invasion by specific organisms, which come from without and multiply within the body. Prevention and treatment, immunity and cure, have been, thanks to experiment, placed upon a definite and sure foundation. The very microbes which cause the disease are utilised, directly or indirectly, as the means of protection against and palliation of it.

But although the irrational opinions formerly entertained in regard to the origin of disease in particular, and to the phenomena of nature in general, are well-nigh extinct, and although the views of science and of religion (as distinct from the theological view) are well in accord as to the uniformity and order of the material world, differences still arise in reference to the complex nature of man and the relation of the mental and the material parts of him. It is too much to expect that all opposition to science and research have ceased and that superstition is got rid of altogether.

Though the struggle between theology and science is probably over and plague and pestilence, as well as earthquakes and famine, are now universally admitted to be the natural effects of other antecedent material events, research by experiment is at the present time being hotly resisted by a band of no doubt well-meaning persons whose intentions are good but whose methods are tortuous. This band having, by way of exciting prejudice, stigmatised experiments on living animals with the name of vivisection—as though all instead of a mere fraction of a unit per cent. of them were cutting experiments—has, under the assumed banner of humanity, moved a great charitable fund for the benefit of the sick poor to exclude from its bounty any direct or indirect assistance to medical education or research, and has been the cause of the appointment of a Royal Commission on Vivisection, whose report we are at this moment eagerly awaiting, though without fear or misgiving as to the result.

Within the last few days[7] we have read (to quote the words of Lord Curzon's letter to the *Times* on Nov. 4th) of an "alleged interview between a notoriously hysterical journalist and the spirit of the illustrious departed, to which publicity has been given," as a political manœuvre in favour of an unpopular Budget. We have had at the same time the opportunity of following a trial of, and a verdict with damages of £1000 against, a hypnotist, in support of whom persons were found to bear witness to his marvellous cures and to his indifference to the dangers of the "Cage of Death." The judgment of Mr. Justice Darling on this case deserves careful perusal. There is also to be seen in the latest issue of a journal whose statements carry much weight with many of its numerous readers the following extraordinary editorial admission: "We have no difficulty in believing that ulcers that have a malignant aspect may be healed by the hope that comes from a potent suggestion. We have ourselves known of more than one case in which every clinical sign of malignant disease of the stomach was present, and in which a cure was effected by means that could only have derived their potency from suggestion."

One of the results of "looking back" is that we realise how phases of opinion and cycles of thought, as well as epidemics of disease, are prone to recur. It is possible for the oldest amongst us to recall periods at which mesmerism, hypnotism, thought-reading, table-turning, and faith-healing were temporarily in vogue, and then passed away again out of favour or notice. Just now there is a phase of opinion—entertained, too, by some honourable and distinguished men—that there is scope and reason for the exercise of "Suggestion" as a remedial and curative agent; and it has been seriously put forward that the already vastly overburdened medical curriculum should be still further charged by the addition of "a sound psychological training," so that every medical practitioner shall be able to

[5] Edinburgh, 1847.
[6] Printed in London in 1787.

[7] It is well known that the number 13 is omitted in the enumeration of cabins on board ship and of rooms in hotels; but an astonishing instance of present day superstition is Lord Crewe's statement in the House of Lords that an alteration was made in the Irish Land Bill "*in order to change the number of the Congested Districts Board from 13, which was regarded as unlucky.*" (Observer, Nov. 28th.)

employ "mental therapeutics" and to engage in "the scientific practice of suggestion."

Surely it behoves the leaders of medical thought and opinion to walk most warily in this direction. A committee to make a careful scientific investigation of the nature and subsequent history of the cases asserted to have been cured by Christian Science, by hypnotism, and at Lourdes, might make a valuable contribution as to the questions involved; but I venture to think it would be highly undesirable to combine "the practice of suggestion" with the ordinary practice of our profession. Such a course seems to offer encouragement to those outside the profession to make arrogant pretensions to curative powers, and might possibly lead to unfounded accusations and regrettable indiscretions even within the profession itself, especially if the character of the cases which are regarded as proper subjects for this treatment be remembered. Even if it should come to be decided that a set of persons should be properly trained to practise treatment by suggestion, I am not quite sure that the doctor should have more to do with the treatment than merely to examine and pronounce whether the case is suitable for its employment.

I will conclude by repeating what I have previously said in the course of this address, namely, that all actions involve belief, and all successful action true belief, and that to arrive at true belief in medicine we must go through scientific scepticism to knowledge, through doubt to certainty, and replace empiricism by experiment and superstition by research.

A FURTHER CONTRIBUTION TO THE SURGICAL TREATMENT OF PUERPERAL PYÆMIA.

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IN 1903 I reported a case of severe puerperal pyæmia in which, following Trendelenburg's suggestion and example, I tied the left ovarian vein, preventing in this way the further propagation of the septic process and obtained a rapid and complete recovery in an apparently hopeless case. Since that time I have had two more cases of this kind under my care and will report them quite shortly.

CASE 1.—The patient, who was 23 years of age, was admitted into the German Hospital on Oct. 25th, 1908. She had been confined on Oct. 11th; two days later she began to feel ill, and on the third day she had a severe rigor. These rigors recurred very frequently; treatment by intra-uterine douches brought no improvement. On admission the temperature was 105° F., the pulse was very rapid, and the patient was very ill and slightly delirious. The uterus was soft and very little enlarged, and the os was permeable; there were no discharge, no laceration, and no swelling in either broad ligament. The abdomen was soft; there was no rigidity, no distension, no vomiting, in fact no sign of peritoneal irritation. Some shreds of placental tissue were removed from the uterus, and its cavity was washed out with lysol; after this the temperature came down to 100°. On the following days, however, severe rigors recurred, during which the temperature rose to 106·4° and 107°, and even in the interval between the rigors the patient was very seriously ill. I had no doubt in my mind that this was not an infection of the purely pyæmic type, and that general septicæmia was largely responsible for the condition. But bearing in mind the result of my first case I thought it right to prevent as far as possible the further entrance of septic matter into the circulation. On Oct. 29th (18 days after delivery), under spinal anæsthesia, the patient having had an injection of scopomorphine first, the abdomen was opened in the middle line. There was no peritonitis; the left ovarian vein was felt as a thick cord completely blocked by a soft thrombus rising from the broad ligament. Its peritoneal covering was divided and the ligature was applied as high as possible, but I was doubtful whether it was really placed above the central end of the thrombosis. The right ovarian vein—which was also thrombosed, although to a much smaller extent—was treated in the same way. From a small incision through the posterior peritoneum in the middle line the two internal iliac veins were exposed but, as they did not show any signs of disease, were not isolated or tied. Of the further course of the case I have only to state that the operation failed to bring about the desired relief. For a short time the patient was distinctly better, but soon she began to complain of pain in the right knee and in the left elbow. On Oct. 31st she had a fresh rigor. Undoubtedly septic matter continued to enter into the circulation, and, as I attributed this to the ligature of the left ovarian vein having been placed too low down, I exposed the vein once more by a retroperitoneal incision, isolated it with great difficulty from the ureter, the parts being all matted together and almost indistinguishable, and placed another ligature just below the termination of the vein. This ligature, however, cut through, and pus escaped from the central end, but no blood. There could be no doubt that the infection had spread beyond the reach of practical surgical measures. Within the next few days the signs of severe septicæmia and pyæmia increased markedly; the right knee-joint was found to be full of pus and had to be opened (Nov. 3rd); from Nov. 5th rigors recurred every day, and the patient died on the 12th, 32 days after her confinement. The necropsy showed the large glandular organs in a state of fatty degeneration; some of the inguinal and iliac lymphatic glands were suppurating. The right ovarian vein was occluded above and below the ligature by a healthy thrombus; the two internal iliac veins were free from thrombosis and quite patent. The case presented undoubtedly some of the worst features of puerperal infection; in addition to the pyæmia there were also obviously signs of septicæmia.

CASE 2.—The next case was more satisfactory. The patient, who was 38 years of age, had had six children. The history of her last pregnancy remained somewhat obscure, as for some reason details were concealed from us as far as possible, but we were able to ascertain that there had been an early abortion on April 5th or 7th, 1909, hæmorrhage continued until April 10th, and from that date daily recurring rigors set in. The patient was admitted on April 15th, with a temperature of 99° F. and a pulse-rate of 72. She looked very ill and anæmic. The uterus was only slightly enlarged, and at its right side, filling up the right broad ligament, was a hard swelling of the size of a small apple, immoveable and very tender. A few hours after admission a severe rigor occurred, the temperature rising to 104·6° and the pulse to 124. This being the fifth or sixth rigor since the commencement of the illness, it was decided to lose no time, and on the following day the abdomen was opened. The right broad ligament was found distended by large coils of thrombosed veins; laterally the thrombus extended well up behind the peritoneum along the interior of the ovarian vein. The peritoneum over the ovarian vein was incised; the vein was ligatured some distance above the thrombus and its peripheral end was excised, together with the whole of the right broad ligament and its venous plexus. This part of the operation caused considerable difficulty, as the tissues were very friable, so that all ligatures cut through, and to stop the continuous oozing from the lateral wall of the uterus and from the floor of the pelvis I had to amputate the uterus. The left ovarian and the two internal iliac veins were healthy and required no ligature. A small strip of gauze was placed into Douglas's pouch and another over the central stump of the ovarian vein. The abdominal wound was closed in the ordinary way. The patient made an excellent recovery. The temperature for three days remained between 99° and 101·2°, but no rigors occurred, and from the fourth day the pulse and the temperature were normal. The wound healed by first intention, and the patient left the hospital well and strong on May 15th.

When I reported my first case only very few instances of this operation had been recorded, and the number of successful cases was lamentably small. Only one patient besides my own case had been saved by the operation. In the course of the last few years, however, by the work of several surgeons, some more experience has been gained, and the operation appears in a more favourable light. Bumm, in Berlin, has had fairly good results, and is now a strong advocate of the principle of the operation—viz., the localisation of the septic process by ligature of the great venous trunks coming from the pelvis. Among English-speaking surgeons Cuff, Bland-Sutton, Lendon and Moore in Australia, and chiefly Dr. Whitridge Williams have performed the operation, and

have recommended this form of treatment. Altogether I have been able to collect 64 cases (including my own 3), in which one or several of the large pelvic veins were tied for puerperal pyæmia, and of these 64 patients 29 were saved. This means a mortality of 55 per cent., but, the numbers being so small, I do not think much will be gained by grouping the cases after statistical principles, particularly as we have to do with an illness of which hardly two cases are alike. To form an opinion of the value of the operation one has to study the individual cases, and one may obtain in this way some guiding rules in what class of cases the operation might be undertaken with some chance of success, and how it should be done.

We ought, of course, first to ascertain what is the mortality in cases of puerperal pyæmia not treated by operation. I found it extremely difficult to obtain a satisfactory answer to this question. In most statistical tables no sharp distinction is made between deaths from puerperal pyæmia and from other kinds of puerperal sepsis, and one has to rely to some extent on the personal impressions of those who have watched a fair number of these cases, and these impressions are somewhat contradictory. While Bumm places the mortality at more than 80 per cent., Olshausen thinks this an exaggerated estimate, and estimates a mortality of about 55 per cent. There is, however, a general consensus that the disease, although often very protracted, is a very fatal one, and one in which recoveries are rare, and that all forms of treatment hitherto at our disposal are disappointing. A mortality of 66 per cent. is, in my opinion, certainly not too low an estimate, and this corresponds with Whitridge Williams's view.

Which class of cases, then, should be selected for surgical interference? All those who have studied the subject agree that in the very acute cases of puerperal pyæmia the chances of success are exceedingly small; in these cases which are due to infection by a particularly virulent type of streptococcus the infection is not propagated along the venous system only; the coats of the veins are quickly pervaded by the cocci and infection spreads along the lymphatic vessels and within the great serous cavities, so that a ligature of the venous trunks can shut off only a very small proportion of infectious matter. On the other hand, Bardeleben has shown by a very interesting series of experiments that if the veins are entered by streptococci of somewhat attenuated virulence, the vascular wall, particularly the endothelium, offers a powerful resistance to the cocci; they are unable to penetrate through the walls of the veins, and their only way of spreading lies within the lumen of the vessels. It is in this class of infection by an attenuated virus that ligature of the infected vessel has its best chance. If by ligature and division of the vessel the cocci are prevented from migrating further they succumb to the resisting powers of the endothelium and of the leucocytes. Clinically it may not be quite easy to distinguish between these two types of infection, at all events in the commencement of the illness. Where the clinical signs of septicæmia prevail and the rigors, which are so prominent and occasionally for some time the only symptom in puerperal pyæmia, are hardly more than a temporary accentuation of the morbid condition, the chance of localising the process by ligature of the veins is very small; on the other hand, patients whose condition in the intervals between the rigors is satisfactory, whose pulse remains good, should have the operation done without much delay. In these cases the decision to operate is often facilitated by the appearance close to the side of the uterus of a hard, tender swelling, formed by the thrombosed veins; it indicates a more or less localised lesion, and, at all events, gives a clue on which side the operation would have to be done.

When Trendelenburg originated this method of treatment he chose the retroperitoneal route to reach the thrombosed veins and in my first case I followed his teaching. I was agreeably surprised to find the operation technically a comparatively easy one; there was no difficulty whatever in exposing the internal iliac and the ovarian vein and to isolate the latter from the ureter; but the conditions were very different in my second case, when, not satisfied with my transperitoneal ligature, I tried to expose the ovarian vein behind the peritoneum close to its opening into the renal vein. On that occasion I found the parts all matted together and very difficult to distinguish one from another. Other surgeons have found the same difficulty, have even failed to find the trunk of the ovarian vein, and have had the misfortune to injure the ureter, and it seems that in the majority of cases the retroperitoneal operation is more difficult and dangerous than the transperitoneal method. Moreover, the retroperitoneal operation gives access only to one side, and in some cases would have to be done bilaterally. The transperitoneal operation offers the one great advantage: that the extent and the localisation of the disease can be made out at once; with the patient in Trendelenburg's position, the broad ligaments, and emerging from them the ovarian veins, may be identified and dealt with without any difficulty, and a small incision into the parietal peritoneum of the posterior abdominal wall will expose the internal iliac veins. These latter, however, if thrombosed, and in the presence of some periphlebitis, may require a great deal of careful dissection before the ligature can be passed round. A case has been recorded (Haeckel) in which it was found impossible to isolate the internal iliac, and the ligature had to be placed on the common iliac vein. The case was not successful, but the nutrition of the leg did not suffer, and Bumm thinks it permissible to tie the common iliac vein in cases in which the thrombus extends very high up into the internal iliac. Bardeleben, in a successful case, was unable to isolate the vein from the artery, and had to include the artery in the ligature without any untoward results. These two modifications may sometimes be preferable to prolonged attempts at isolating the internal iliac vein.

Theoretically it would seem advisable to tie all four great pelvic veins, the two internal iliac and the two ovarian—and also a very frequently found median iliac vein—so as to exclude all possible channels for the spread of infection. But a fair proportion of cases have been recorded in which, after ligature of two or even of only one of the pelvic veins, a good result was obtained. It is the great advantage of the transperitoneal operation that all four veins can be completely exposed and examined, but it seems sufficient if the ligature is applied to those which are actually diseased, particularly in cases which could not stand prolonged dissection, and they will be the majority. The ovarian veins should be ligatured as near as possible to their point of termination.

Latzko in Vienna has tried several times, and once with success, to approach the diseased veins by the vaginal route. It is impossible to withhold one's admiration for the great skill and dexterity with which this must have been done, but I believe very few surgeons will be inclined to follow his example. View and space are necessarily limited and hæmorrhage or any other complication could be controlled only with great difficulty.

Ligature of the veins, or, better still, double ligature and division has proved sufficient in most of the successful cases, but it may well be questioned whether the results could not be improved by excision of the diseased vessels or, in cases where, for some reasons, the retroperitoneal route is chosen, by slitting them open and evacuating their septic contents. In my two successful cases I acted in this way, and I cannot help thinking that the unexpectedly rapid recovery was due to this more radical procedure. Prochownik in Hamburg operated in the same manner and had a very satisfactory result, marred only by a septic infection of the abdominal wall. I admit there is a certain amount of danger attached to this method; the peritoneum may be infected, or the hæmorrhage may be considerable and may necessitate, as in my third case, removal of the uterus. But it is undoubtedly in accordance with our general surgical principles to remove the septic focus wherever and whenever possible. Some further experience is required to show whether this extended operation is really advisable. I would advise in such a case drainage of the abdominal wound. Several otherwise successful cases have been retarded in their convalescence by septic infection of the abdominal wall. The loose flaccid layers of the abdominal wall after pregnancy seem to be particularly favourable to the spread of infection, and the small precaution of drainage is likely to be well repaid.

That there is a certain amount of danger in the operation cannot be denied. In the transperitoneal operation the possibility of a general peritoneal infection ought to be borne in mind, but we should be able to guard against this just as we are able to protect the peritoneum in operations for a gangrenous appendix. It has also been said, and with

justification, that patients suffering from puerperal pyæmia are bad subjects for any operation; if we decide to operate earlier this argument is likely to become less important.

It is naturally with some diffidence that one recommends an operation which so far in 55 per cent. of the cases has been unsuccessful, but I would appeal to anyone who will take the trouble to study the individual history of those cases who recovered after the operation. They were all very seriously ill and seemed to be going down-hill rapidly, and I believe I am not saying too much if I state my opinion that the very great majority of them would have died without surgical interference. And among the many failures we find the very first operations which were done tentatively and hesitatingly—often after too long a hesitation. Moreover, a good many cases are included in the list in which, from the nature of the infection, a good result could not possibly be anticipated. By making a careful selection of cases suitable for the operation and by operating at an early stage much could be done to reduce the mortality. Dr. Whitridge Williams has lost only one patient among his five operations, and thinks that in future the mortality should not exceed 10 per cent., at least in cases where thrombosis is limited to the ovarian veins.

It is evident that this form of treatment is still on its trial and that many questions remain which will only be answered by a much more extensive experience, but I think the following may be suggested as a good working rule for the present. 1. In cases of puerperal pyæmia an attempt should be made to localise the septic process by ligature of the great pelvic veins (ovarian and internal iliac and possibly median iliac). 2. The very acute cases of puerperal pyæmia are not suitable for this operation, but the more chronic cases which are due to infection by an attenuated virus promise a good success, provided the operation is not delayed too long. 3. The veins should be exposed by the transperitoneal route in preference to the retroperitoneal or vaginal way. 4. All the four great venous trunks should be exposed and examined, but isolation and ligature seem necessary only for those veins which are actually found diseased. 5. Further experience is required to decide whether the results can be improved by excision of the venous trunks and plexuses in preference to simple ligature.

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Finsbury-square, E.C.

HUNTERIAN SOCIETY.—The last day for sending in essays for the silver medal of this society will be Dec. 31st. The medal is awarded for the best essay embodying the results of original observations by a general practitioner.

THE TREATMENT OF NÆVI AND OTHER CUTANEOUS LESIONS BY ELECTROLYSIS, CAUTERY, AND REFRIGERATION.[1]

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EVER since I took charge of the electrical department of the London Hospital the treatment of nævi has been a very important feature of the work, and the number of cases to be treated has steadily and rapidly increased. In a period of six years some 2000 cases have been treated by myself, and during that period the methods employed were electrolysis, puncture with a fine galvano-cautery, and the high-frequency spark. In one case, involving the left mamma of a female child, I used pieces of sterilised magnesium ribbon plunged into the growth and left there. I hoped by this method to avoid destroying the mammary gland, and so far as one could judge the result was satisfactory; but, of course, it is impossible to be sure of this until the child reaches puberty. I am convinced that this method of treating nævoid growths has a definite value, but I am also of the opinion that for routine hospital practice it is not suitable.

Electrolysis.—While I used this agent very freely at first, latterly I have reserved it for the cavernous type of nævus, for which I find it the most satisfactory of all that have been proposed. While excision is an ideal method from a theoretical point of view, I am sure surgeons will admit that the method is frequently followed by recurrence—at least I often have cases referred to me for electrolysis in which this has followed excision of the original growth. Possibly also surgeons have had to excise a recurrence following an electrolysis by myself, but if so, they have been polite enough not to tell me of it. In this, as indeed in all methods of treating nævi, the secret of success is to know when to stop. It is better to do less than enough and to finish on a subsequent occasion than to risk an unsightly scar through trying to make one operation do all that may be necessary. It is, no doubt, good policy, even advisable under certain conditions, to make one operation suffice, but when this is done, even with the greatest care, there is no little risk of the resulting scar being less elastic and more noticeable. On the other hand, by adopting a less vigorous plan of campaign and giving full time between the operations for the effects of each to be developed, I have had the most satisfactory results in cases of such severity that the outlook seemed well-nigh hopeless.

One case in particular—a deep, cavernous nævus, involving the left side of the face from orbit to chin—was treated by electrolysis, piecemeal, for nearly two years, during which period the child was anæsthetised no less than 16 times. The result was better than I dared to expect. The face was very nearly symmetrical, and while the affected side was mostly scar-tissue it was soft, pliable, and elastic; every trace of nævoid tissue had disappeared, so far as one could tell. For this method of treatment I always use the bi-polar needle designed by Dr. Lewis Jones. Mine has fairly stout platinum needles, which are heated to redness in the bunsen flame before and after each insertion. They are allowed to cool before being pushed in, except when dealing with scar-tissue, which is usually very resistant. Here much time is saved if they are inserted while still hot. I have never seen any bad results from this, and what would be a matter of considerable difficulty otherwise becomes quite easy.

I generally use a potential of 10 volts, corresponding to six or eight Leclanché cells, and this is turned on to the needles before the latter are placed in position, the skin itself forming an excellent rheostat.

Cautery puncture.—In my experience the majority of cases can be satisfactorily dealt with by means of a fine galvano-cautery. It has the merits of efficiency, simplicity, and economy of time. Its chief value is in the treatment of capillary and stellate nævi, and even those of the cavernous

[1] A paper read before the Electro-Therapeutical Section of the Royal Society of Medicine on Nov. 19th, 1909.

type, so long as they are small in size, and do not extend too deeply. Here, again, I strongly advise against attempting to do too much at one sitting. Each puncture will give rise to an approximately circular area of inflammation—of which the puncture is the centre—and this may be from one-eighth to a quarter of an inch in diameter.

Obviously, to get the best result, our aim must be to destroy as little normal tissue as possible; all we require is to set up a simple fibroplastic inflammation, which will cause a clotting of the blood in the nævoid vessels, and these in turn will become obliterated by the resulting new-formed fibrous tissue and its subsequent contraction.

In treating a capillary nævus I first ascertain by inquiry and inspection if the growth is spreading, and if it is my first efforts are directed towards preventing this progressive increase in size. This I do by making a series of punctures, about one-eighth of an inch apart, along the nævo-cutaneous margin, so that the influence is exerted as much in the healthy skin as in the nævus itself. If the nævus is a small one, say less than three-quarters of an inch in diameter, probably nothing more will be required, and except in the large ones this is a very convenient point to stop for the first application. The growth is now safe against spreading, and it sometimes happens that the vessels feeding it are so seriously interfered with by what has been done that after a period of two or four weeks the growth has undergone a reduction in size as well as in depth of colour. In such a case it is obvious that there will be less to do to finish it off, and in this way we conform to the principle of destroying as little of the original tissue as possible. With the larger capillary nævi it is, of course, advisable to go over the surface as well as the margin. The punctures should be from one-eighth to a quarter of an inch apart, and, in my opinion, should go right through the whole thickness of the skin. In nearly all cases the cautery should be quickly withdrawn the moment the sense of resistance, which the skin gives, is lost. This prevents the action of the cautery extending too far.

My reasons for insisting on going right through the skin are two: in the first place it is otherwise impossible to be sure that the nævus will be affected right through its entire thickness, and secondly, because it is much less painful afterwards. You can easily understand that if you are making a lot of punctures into, but not through, the skin a number of them will be burns of the third degree—which are intensely painful as you well know.

After a nævus has been treated in this way the immediate result is a pink scar with a somewhat pitted surface, the pits corresponding to the individual punctures. As time goes on the surface becomes paler and more uniformly smooth. In the case of children seen about 12 months afterwards the area is soft, smooth, and elastic, and as to colour scarcely to be distinguished from the surrounding skin. The pitting left by the punctures is still present, but not very noticeable. It tends to become less perceptible as time goes on, but slight traces can be found years afterwards.

The high-frequency spark (*"fulguration"*).—The only class of nævi that are beneficently influenced by this method is that comprising what is generally called the "port-wine stain." This is another way of saying that it is only applicable where the growth only involves the superficial layers of the skin. The method of procedure is akin to that described as "fulguration" and practised to some extent on the continent for malignant growths, but any ordinary high-frequency apparatus is sufficiently powerful for our purpose.

I have now treated about 20 cases by this method, some of which have had several applications. The milder ones have been cured to all intents and purposes; the more severe ones have been improved to an extent which is roughly inversely proportional to the severity of the original lesion. The method of making the application is familiar to everyone and so need not detain us.

From my own experience I am of the opinion that the narrower the spark-gap and the closer the metal point electrode is to the skin the more superficial is the effect produced, the more does the thermic effect predominate over the electrical effect, and the changes are produced more rapidly. I am also of the opinion that under such conditions we are more frequently troubled with keloid changes in the scar; this I attribute to the thermic effect, because I feel sure that the scars following heat burns are more prone to keloid changes than those from other kinds of injury. Probably some will disagree with me in this. It is merely a record of my own personal observations. I find, however, that any high-frequency application made with the electrode close to the skin surface, and long enough to produce at least some destruction of tissue, is very likely to be followed by keloid changes. The minimum distance of the electrode from the skin should be about three-quarters of an inch. It takes a longer time to get the desired reaction, but the effect penetrates more deeply and is less likely to be followed by keloid changes in the scar. With such an interval between the electrode and the skin, the application is so painful that a general anæsthetic is almost always necessary, and the troubles of the anæsthetist are not made lighter by the objectionable noise, which seems an unavoidable part of the procedure. Ether must not be used on account of the risk of the vapour catching fire from the spark—this has happened once to my personal knowledge, owing to an assistan accidentally filling the usual chloroform bottle with ether.

While I consider the high-frequency spark a valuable means of treating "port-wine stains," I have almost entirely discarded it for the new method I now propose to show you. As a result of the experience I have had with the foregoing methods in this work, I look on no case as too severe to make some serious effort, especially in female children, to remove an unsightly birth mark. Practically every case can be vastly improved, while the less severe ones can be cured to all intents and purposes. With care and not attempting to do too much at one time, unsightly scarring is avoided, and deformity from cicatricial contraction kept within the narrowest possible limits.

Refrigeration.—The methods so far described have been those employed by me almost exclusively up to midsummer of the present year. At that time Dr. Geyser of New York called on me and asked me if I would try a method employed by him for nævi and various superficial conditions that in his hands had been remarkably successful. This I put into practice forthwith, and the method is so free from the objections common to most others, and the results are so satisfactory, that I now treat more cases with it than by all the other methods taken together.

The process is one of refrigeration and is carried out by means of the local application of solid carbon dioxide. This is obtainable in iron cylinders, containing some 20 or 30 pounds of the liquefied gas, at a pressure of over 20 atmospheres. It is obtained from the combustion of coke and finds its chief use in the mineral water industry. When the liquefied gas is allowed to escape into the atmosphere the sudden expansion causes a prodigious lowering of temperature, and it appears in the form of a white semi-solid snow. By collecting this in a suitable receptacle it can be formed at once into a comparatively hard stick or crayon, not unlike an ordinary candle in appearance. Also, it can be compressed into a mould of any desired shape or size, and subsequently cut to any form with a knife. The temperature of the frozen gas is -79° C. (110° F.).

Of course, making use of low temperatures in treatment is by no means new. On the continent cases of lupus vulgaris have been successfully treated by ethyl chloride spray. Later liquid air was tried, and I understand that two or three months ago a demonstration on the use of liquid air in dermatology was given in this room by the late Dr. Radcliffe Crocker, whose recent demise we all lament. While liquid air possesses the quality of intense cold to a degree far surpassing anything we know of, it is extremely difficult, even impossible, to use it in an efficient manner. Its liquid form is responsible for this, making it difficult to control and impossible to make use of that most important adjunct—pressure. Whatever be the agent we employ for the freezing process, the principle involved is of course the same, but that is not to say that the different agents are equally advantageous in practical use.

The point I wish to emphasise about solid carbon dioxide is that it is a solid and yet sufficiently soft that it can be moulded or cut to any convenient size or shape. Also, for the same reason, it enables us to use as much pressure as we wish and thus freeze the tissues to any desired depth within reasonable limits. A further point to be remembered is that our freezing agent maintains a constant temperature. As the tissues give up their heat to the crayon the surface of the latter becomes gaseous and escapes into the atmosphere. At ordinary atmospheric pressures carbon dioxide at -79° C. is a solid, at -78° C. it is a gas. The surface

in contact with the part under treatment is thus being constantly renewed.

To say that the crayon is "in contact" is probably not literally correct. It is more likely that it is kept apart from the part under treatment by a thin layer of gas. For this reason, it is possible to hold a small piece loosely in the hand without discomfort. Also, if a flat disc of solid CO_2 be placed upon a level sheet of plate glass, slightly warmed, the disc can be seen to be in constant motion, and if one end of the glass be raised the disc slides down the slope with rapidity out of all proportion to the degree of inclination. It will be seen that some pressure is necessary to get any effect at all, but owing to its rigidity we can make as much pressure as may be necessary. It is this matter of pressure that gives CO_2 such a great advantage over other refrigerants. The solid gas evaporates very slowly. A crayon five inches long and one inch in diameter will last from one to two hours if left in an ordinary room. Wrapped in cotton wool it loses about half its weight in a period of four hours. With such a crayon I have made over 30 applications, a piece about one and a half inches by half an inch remaining.

Dosage.—As with any other new agent, so with this—we have much to learn. There is no reason, however, why the question of dosage cannot be reduced to almost mathematical accuracy here. As we have seen, the temperature of our crayon is a constant one. Hence the only variable factors in dosage are time and pressure. There is no difficulty about the measurement of time, and a holder with a spring inside, which is adjustable, would solve the latter point. I doubt, however, if this will be necessary—but it is easy to see how the depth and intensity of the subsequent reaction could be regulated with almost absolute certainty.

I am always adverse to the use of any appliances that tend to efface the personal equation entirely, and in this case no very great experience is required to make the necessary pressure one's self. To come to practical details, take the case of an ordinary capillary nævus of moderate size, less than one inch in diameter in any direction. I trim the crayon roughly to the shape of the nævus, and I prefer it to be slightly larger. It is now applied to the nævus and firmly pressed down, so as to drive the blood out of the part, or at least arrest the circulation. The average duration of the application will be about 40 seconds. If there is bone immediately beneath, a shorter time will do. If on a soft place such as the thigh or abdomen, it should be a little longer. A "port-wine mark" is best treated with a moderate degree of pressure, depending on the depth of the lesion. For a cavernous nævus the end of the crayon may be the same size or slightly smaller than the area of the growth. A long application with deep pressure should effectually freeze the whole mass. In any given case the time and pressure of the application will be decided by the conditions present.

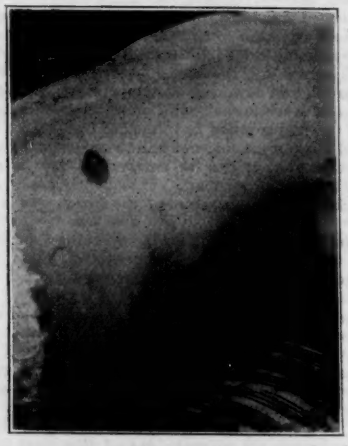
The diseases curable by this agent are numerous, and, I fancy, will be of great interest to dermatologists. As I have said, I now use it for nævi more than all the other methods I have mentioned taken together. It is very successful for moles and other blemishes; it seems to have a favourable influence on lupus erythematosus, and I have successfully treated patches of lupus vulgaris. It answers excellently for warts. In the treatment of the latter, a long application is necessary on account of the poorly conducting properties of the growth. I do not time the application: after trimming the crayon to the size of the growth, I apply it with firm pressure until a narrow zone of healthy tissue around the base is frozen. If we stop before this the result will not be satisfactory. In the keratoses accompanying X ray dermatitis, brief applications answer exceedingly well. The list of diseases to which this agent is applicable will probably be extended very greatly. No doubt within the next year or so dermatologists will have much to tell us on this subject.

The preparation of the solid carbon dioxide.—The first requirement is obviously a cylinder of the compressed and liquefied gas. A large cylinder is much the more satisfactory. It should be mounted on a stand at a convenient height and with the stopcock on a lower level than the opposite end, so that the liquid gas covers the inner orifice of the valve. The next procedure will depend on whether we have a large or a small number of applications to make. In any case we shall require an ordinary cylindrical

FIG. 1.

Showing towel secured to valve with bandages and ready for filling.

FIG. 2.



Before operation.

FIG. 3.

Three weeks after operation.

ruler about an inch in diameter and a hand-towel. The latter is folded into three, lengthwise, and rolled around the ruler as tightly as possible. The ruler being withdrawn, we have a hollow porous cylinder, in one end of which we place a short, loosely fitting cork. If we have a large number of applications to make, we take an ordinary bandage and bind around the towel a few turns and apply its open end over the cylinder outlet. The bandaging is now continued in such a way as to secure the towel to the valve and make as tight a joint as is possible to do by bandaging. I find two ordinary bandages sufficient. The gas cylinder is now turned so that the valve is pointing downwards and the valve opened, allowing the space within the towel to become filled with the soft CO_2 snow, which later becomes solidified, and this is continued until it is packed firmly. (Fig. 1.)

The fixing of the towel and the management of the valve require a certain amount of practice, but it is the easiest method of getting a large firm crayon. After the valve is closed the bandages are removed, the towel unrolled, and the crayon secured with a turn or two of lint. It is now ready for use. If we require enough for one or two applications only, instead of binding the towel to the cylinder valve we hold it in place with one hand while we open the valve with the other. The towel becomes filled with the soft snow, and we cut off the gas as soon as it begins to blow off around the top. We now place this snow in a metal or vulcanite tube of the desired shape and size, and pack it down hard with a suitable rammer, using a mallet if a particularly hard crayon is wanted. No matter how hard we pack it it at once frees itself, and can be pushed out quite easily. The tubes for moulding can be of any shape or size. The square one is used for doing large areas without leaving intervening spaces untreated, as would be the case if a round applicator were used.

Effects of the application.—On removing the crayon after an application the depression made by it remains; the frozen surface is pure white and hard, like a piece of china. The process of thawing occupies about the same time as the application, and the depressed tissue gradually returns to its normal place and colour and is found to be covered with moisture of condensation. Reaction sets in immediately—within a few seconds the treated area is of an appreciably firmer, brawny consistency, and in two or three minutes perceptibly swollen. A wheal develops, with acute hyperæmia, within half an hour, and a vesicle frequently within an hour, but this may take longer or not develop at all in the case of a very short application. An application of 30 seconds or longer will almost certainly be followed by scarring. A very intense superficial destruction is obtained by a second application immediately after the tissues have thawed out from the first one.

With regard to the after-treatment, this is very simple. Boric acid ointment is what I use almost invariably. If a blister forms the fluid is carefully let out, and this may have to be done a second or even a third time. Within a few days a crust forms which should be allowed to come off of its own accord. The treated area is completely recovered in about a fortnight. The surface is then perfectly smooth and of a delicate pink colour, which gets paler as time goes on. The ultimate result is a pale, soft, pliable, and elastic scar which is as good as, or better than, any produced by any other caustic agent, or even radium. Like radium, and unlike the cautery or other caustic agent and electrolysis, there is no immediate destruction of tissue; the results are achieved by a reaction set up in the tissue itself, and we have a complete range of effect, from a simple mild hyperæmia which clears up in a few hours to a complete necrosis. Unlike radium, it is cheap, and instead of waiting days or weeks for a reaction we get this within a few hours. I predict that it will displace radium for many of the purposes for which the latter is now used.

I show some results obtained. In a photograph they do not differ greatly from those treated by other methods, and no good purpose would be served by showing a number. (Figs. 2 and 3.) These are typical of the results. In the majority of cases a single application lasting from 30 to 60 seconds is all that is necessary. If the cure is incomplete a second one can be made as easily as the first.

The application is practically painless, and no anæsthetic is ever necessary. I have had children who never moved or cried during the application. The majority do make a noise, but this is more because they are held still than of the pain. It is a curious fact that many adults voluntarily say, "It is beginning to hurt now," at about the twenty-fifth second. The "thawing out" is more painful and uncomfortable than the freezing. With regard to time, two or three cases can be finished off while one is being anæsthetised for electrolysis or cautery. I have treated 30 cases within an hour and a half.

I have not yet seen any keloid in the resulting scars, nor have I had an opportunity of examining the changes that take place in the frozen tissue. It is quite possible that at this very low temperature changes other than those following ordinary frost-bite would be found. Ordinary frost-bite lasting no more than 60 seconds does not produce anything like the same degree of reaction that we get with solid carbon dioxide. With the fixation and rigidity which occur just below freezing point, followed by the expansion of the frozen liquid part of the tissues, which must take place with this extreme lowering of temperature, it is conceivable that the cells are mechanically injured, the reticulum broken down, and the cell-wall burst, just as a bottle full of water is fractured after being left outside on a frosty night. This would at least account for the immediate and profound reaction that occurs after application. This, however, is conjecture, and I shall be glad to have the views of others regarding this question.

To say that solid carbon dioxide is merely a caustic, as some have asserted, is not quite correct. All caustics, strictly so-called, destroy tissue immediately—e.g., the actual cautery, and various chemical substances—but CO_2 does not do so. After the part has thawed out, the whole of the treated area is still living, as evidenced by the intense reaction which sets in. Local death may occur later, owing to inflammatory stasis; but this is the result of a vital reaction, and not an immediate result of the application of the irritating substance.

In conclusion, I wish to apologise for such a lengthy paper, but I am sure it will be agreed as to the value and importance of this interesting and fascinating substance as a therapeutic agent. Personally, I look upon solid carbon dioxide as the most important addition to the list of physical agents employed in therapeutics since that of radium, and, as I have already stated, I predict that it will be found to compete successfully with radium in the treatment of many superficial lesions.

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THE INFLUENZA BACILLUS THE CAUSE OF AN EPIDEMIC OF BRONCHO-PNEUMONIA.

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THE cases which came under the personal observation of one of us were five in number and embraced all the children in one family, but there were also two other children in an adjoining house who suffered from pneumonia at the same time. The history of the five cases is as follows:—

In October, 1908, one of us was asked by Mr. R. Clayton Morris to see the children of a certain Mrs. A who were suffering from pneumonia. All five children, their ages varying from 12 months to 9 years, were in bed in one room, three of them dangerously ill with pneumonia and the other two less seriously. The previous history was that all had been strong and well with the exception of the oldest, a girl aged 9 years, who was said to have had tuberculous peritonitis some years ago and had made a good recovery from it. The history of the onset of the illness was as follows. The first of the children to fall ill was a boy aged 7 years, who sickened on Oct. 12th, and was quickly followed during the next two days by the other four children. They became feverish and ill without any definite rigor, although most of them vomited at the commencement of their illness, and two of them—namely, the first two—commenced with pains in the limbs and sore throat and were supposed to have influenza. In the remaining three cases the children

simply became feverish and rapidly developed lung symptoms. None of them had herpes labialis. One of us saw the children on the third day after the onset of symptoms (Oct. 14th) and the condition of matters was tragic in the extreme. All of them had broncho-pneumonia involving both lungs, and three of them had temperatures of 102° F. or over, a pulse-rate of over 140, and respirations over 70 per minute. The two worst, the boy aged 7 years and a girl aged 2, were unconscious, and the boy evidently had not long to live. The boy was too ill to be moved, but the two younger girls were admitted to hospital, leaving the baby and the oldest girl, who was not very ill, to be nursed at home, as the mother's resources were somewhat limited. The pneumonia was of broncho-pneumonic rather than of lobar type, the dulness and tubular breathing not being so extreme and extensive as in pneumococcic pneumonia. The boy never rallied at all and died on Oct. 15th, the fourth day of his illness. The girl aged 2 years died on the fifth day of her illness, gradually sinking in spite of all that could be done, and the other three children recovered, the two older girls somewhat rapidly and the baby after three weeks' illness.

An endeavour was made to ascertain the nature of the micro-organism causing the condition, both by taking cultivations from the organs of the boy who died on Oct. 15th and by cultivations from fluid obtained by exploratory puncture of the consolidated lung from the children in hospital; but no organism was isolated until the organs from the child who died in hospital were carefully investigated. The ears of the children were carefully examined, but suppurative otitis media was not the cause of the severity of the symptoms. In the case of the girl who died in hospital there was some congestion of the left membrana tympani two days prior to her death, but no suppuration, although at the necropsy pus was found. Clinically the remarkable feature of the cases was the suddenness with which all five children were attacked and the severity of the pneumonia in each case.

Necropsy.—A post-mortem examination was performed by one of us on the body of the girl, aged 2 years, who died in hospital, on Oct. 19th. The body was that of a well-developed and well-nourished child. Rigidity was present but not marked. There was some lividity of the lips. There was nothing of note in the heart. Both lungs showed a recent acute fibrinous pleurisy; both showed irregularly distributed purple areas scattered over the surface with intervening paler areas, the typical appearances in lobular pneumonia. On palpation numerous solid nodules could be felt. On section the lungs appeared congested with more darkly coloured solid nodules scattered through their substance. The bronchi contained some secretion and their mucous membrane was congested. The bronchial glands were enlarged and congested. The peritoneum showed chronic inflammation, evidenced by thickening of the capsule of the liver and spleen. The liver and the kidneys showed fairly well-marked cloudy swelling, and the spleen was slightly enlarged, and, on section, pale with prominent Malpighian bodies. The vessels of the brain were congested and there was some excess of cerebro-spinal fluid. Both middle ears contained pus.

The surface of one of the lungs was seared, an incision was made with a sterile knife, and portions of the fluid exuding from the lung substance were inoculated into broth and blood agar. No growth was observed on the first day, but after 48 hours minute, discrete, translucent colonies were visible on the blood agar. The broth also showed some turbidity. On examination the organism was found to be a very minute bacillus, although at first it had the appearance of a coccus. The organisms occurred singly or in pairs, end-to-end. They stained fairly readily with ordinary stains, but dilute fuchsin gave the best results. The Gram reaction was negative. The organism did not grow well on broth or agar, but on blood agar the growth was fairly profuse, the colonies being barely visible to the naked eye after 48 hours and did not become subsequently much larger. They were most numerous at the margins of the blood streaks. It was found that subcultivation every week or ten days was sufficient to keep the cultures alive. In this way the organism was kept growing for five or six months. After some months, however, microscopic examination of the growth showed very remarkable appearances. The bacilli were on an average larger, some were thin, and others thick and club-shaped; filamentous forms were not infrequently observed. Soon after the organism was isolated a strong emulsion of it was made in normal saline and injected into the ear vein of a rabbit. The animal did not develop any symptoms at all. At first we had little difficulty in concluding that the germ was the influenza bacillus. Later on, when the involution forms appeared, we had some doubt as to its identity, but when we found that such forms have been frequently described in connexion with old cultures of the organism, notably by Grassberger,[1] the fact merely confirmed us in our original conclusion. We are indebted to Dr. C. J. Lewis for assisting us to classify the germ.

Microscopic sections of the lung showed the usual appearances of a capillary bronchitis and broncho-pneumonia, and sections stained with dilute fuchsin showed minute bacilli in small numbers in alveoli and bronchi similar to those cultivated.

Pathologically the chief points of interest in the cases are the epidemic nature of the disease and the occurrence of the influenza bacillus as the only organism present in the lung in one of the cases. From the occurrence of the cases at one and the same time, and from the fact that cultures upon ordinary media failed to show any growth in the other fatal case, one may fairly conclude that the causal germ in all the other cases was the influenza bacillus. The occurrence of this germ in broncho-pneumonia has long been recognised, and the fact that it is not infrequently the only organism present in the lungs is emphasised by Fraenkel.[2] The main point of interest in the present instance is therefore the occurrence of the influenza bacillus as a cause of a number of cases of broncho-pneumonia arising so obviously in connexion with one another as to warrant the term epidemic.

EIGHT CASES OF EXTERNAL ANTHRAX.

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CASE 1.—A man, aged 23 years, a willower, was admitted to hospital at 5.45 P.M. on April 12th, 1906. On April 9th the patient noticed a sore on the left upper eyelid. On the 10th the eyelid was swollen and he was not able to open the eye; there was no pain. On the 11th the left side of the face began to swell, and on the 12th he saw his medical attendant who advised him to go to the infirmary. On admission the temperature was 101·2° F. and the pulse was 120. The left upper eyelid was swollen and covered with vesicles; there was a red inflammatory zone just below the eyebrow. The left side of the face was swollen and brawny as far as the angle of the jaw; there were no enlarged glands, no soreness of the throat, and no history of vomiting or shivering. Owing to the position of the pustule it was decided not to excise it. At 9 P.M. 40 cubic centimetres of Sclavo's serum were injected subcutaneously. On April 13th the temperature was 101·4°, the pulse was 104, and the respirations were 22. The left side of the neck was swollen. 40 cubic centimetres of serum were injected subcutaneously, and also, close to the pustule, 10 minims of carbolic acid solution (5 per cent.). The evening temperature was 103·4° and the pulse was 106; the patient vomited four times during the day. On the 14th the temperature was 103·4° and the pulse was 110. I injected 30 cubic centimetres of serum and also 10 minims of carbolic acid solution. There was no improvement in the condition of the patient. On the 15th the temperature was 102°, the pulse was 104, and the respirations were 20. The right side of the face and neck was swollen and the left cheek was covered with vesicles; 10 minims of carbolic acid solution were injected. On the 16th, at 1.30 A.M., the right eye was closed and the œdema now involved the chest as far as the nipples. I made four incisions, two on the forehead and two on the left side of the face. At 10 A.M. the temperature was 100° and the pulse was 108; the œdema of the face was less; 40 cubic centimetres of serum were injected. On the 17th the condition of the patient was much improved; there was eversion of the left upper eyelid owing to œdema of the conjunctiva.

[1] Grassberger: Centralblatt für Bakteriologie, Band xxiii., 1898, S. 353.
[2] Fraenkel: Spezielle Pathologie und Therapie der Lungenkrankheiten.

The temperature was 100° and the pulse was 108, on the 18th falling to 99° and 100 respectively. There was also on the 18th considerable diminution in the œdema of the face, neck, and chest. I injected 20 cubic centimetres of serum; the left cornea was clear. On the 19th the local and general condition of the patient was much improved. I incised the swollen conjunctiva; the temperature was 100·4° and the pulse was 100. On the 20th there was a rash all over the body; he complained of pains in the back, thighs, and right elbow. I prescribed aspirin, 10 grains, thrice daily. The temperature was 99° and the pulse was 112; 20 cubic centimetres of serum were injected. On the 21st the temperature was 101·4° and the pulse was 110; there was a large slough on the left upper eyelid. The œdema of the face, neck, and chest was considerably diminished. On the 22nd the temperature was 100·8°; the pains were not so severe and the rash was disappearing. On the 23rd the temperature was 99° and the pulse was 80. The patient's condition was much improved and he was evidently out of danger. On May 2nd he was photographed; the slough on the eyelid and the swollen conjunctiva are well shown (Fig. 1). On May 14th the slough was removed; and on June 12th, the ulcer having healed, I incised the scar and removed the thickened conjunctiva.

FIG. 1.

CASE 1.—Slough on the eyelid and swollen conjunctiva before operation.

The lids were brought together with Pagenstecher's thread. The patient was discharged on July 14th. Fig. 2 (reproduced from a photograph taken in September, 1906) shows the result of the operation.

CASE 2.—A married woman, aged 32 years, a weaver, was admitted at 10.45 A.M. on June 1st, 1906. On May 27th she noticed a "heat lump" over the left eyebrow, on the 29th there was some swelling around the sore, and on the 30th she complained of pain below the left ear, and was unable to open the eye. She consulted her medical attendant on the 31st and was advised to go to the infirmary. On admission the temperature was 100° F. and the pulse was 110. About half an inch above the left eyebrow there was a typical malignant pustule; the forehead, eyelids (left) and left side of the face and neck were œdematous. Two enlarged glands were felt below the left ear. She did not complain of sore-throat; there was no history of vomiting or shivering. Under local anæsthesia (cocaine and adrenalin) I excised the pustule and injected 40 cubic centimetres of Sclavo's serum. The œdema disappeared rapidly and the patient felt quite well in a few days. On June 10th, by undercutting the skin all round the ulcer, I was able to bring the edges almost together. This patient left the hospital on June 13th. I saw her on March 20th, 1909, and the scar was scarcely visible.

CASE 3.—A youth, aged 18 years, a wool-shaker, was admitted at 11.30 P.M. on Nov. 1st, 1906. On Oct. 29th and 30th this boy was "packing sheets of wool" for the willower, and on the 31st he was shaking wool which had passed through the willow-machine. On the evening of the 31st he felt a "sore place" on the right side of the neck; there was no swelling. On Nov. 1st he went to work at 6.30 A.M.; the right side of the neck was swollen; he had no pain. During the day the right side of the face began to swell, and about 10 P.M. he saw his medical attendant, who sent him to the infirmary. On admission the temperature was 100·4° F., and the pulse was 108; the tongue was clean. On the right side of the neck, about 2 inches below the lobule of the ear, there was a well-developed anthrax pustule. There was œdema of the right side of the face and neck. No enlarged glands could be felt. There was no history of vomiting, sore-throat, or shivering. On Nov. 2nd, at 12.30 A.M., under chloroform, I excised the pustule and injected 40 cubic centimetres of Sclavo's serum. The boy slept well during the night. At 10 A.M. the temperature was 101° and the pulse was 96. The face, neck, and upper part of the chest were very œdematous. The patient was drowsy. At 6 P.M. the temperature was 102°, and the pulse was 112. He vomited once. At 11 P.M. I injected 40 cubic centimetres of serum. On the 3rd the temperature was 100·6° and the pulse was 110. The boy vomited twice. The face, neck, and chest were very much swollen; the

FIG. 2.

CASE 1.—Result after operation.

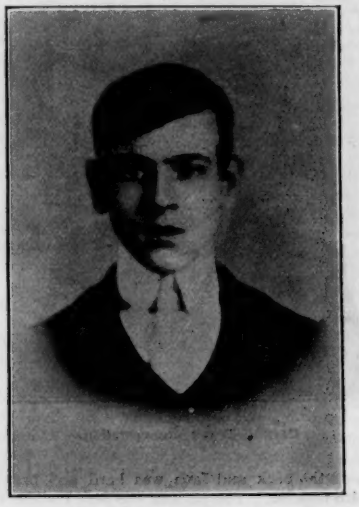
right side of the neck and face was hard and brawny and covered with vesicles. The patient was very restless and had difficulty in swallowing. At 6 P.M. the temperature was 101·2°, and the pulse was small and rapid. At midnight I made four incisions and injected 20 cubic centimetres of serum. On the 4th the boy's condition was very bad; the temperature was 97·6°. I was unable to count the pulse. At 7.30 P.M. the temperature was 99·8°, the pulse was 130, he had difficulty in swallowing, and the breathing was stertorous; he vomited several times. 20 cubic centimetres of serum were injected. On Nov. 5th the temperature was 100·6° and the pulse was 130; there was very little change in the œdema. There was a thick cloud of albumin in the urine. At 6 P.M. the temperature was 101·2° and the pulse was 136; the boy was restless and had great difficulty in swallowing; 40 cubic centimetres of serum were injected. On the 6th at 4 A.M. the boy was very restless; the pulse was quick and irregular. I changed the dressing and injected liquor strychninæ (5 minims). At 6 A.M. the nurse came to my room and said that the boy was much worse. When I reached the ward he was dead. No post-mortem examination was made, the coroner being satisfied with the bacteriological report from the Public Health Laboratory, Wakefield. Figs. 3 and 4 are reproduced from photographs taken, one six months before the boy's fatal illness and the other on Nov. 4th at 2 P.M.

CASE 4.—A girl, aged 14 years, a hanker, came to the infirmary on March 4th, 1907. On Feb. 27th she noticed "a

sore" on the front of the right forearm. She saw a herbalist on March 1st and was told to apply poultices. On admission there was a well-developed malignant pustule on the front of the right forearm about four inches above the wrist and the forearm was swollen as far as the elbow. The temperature was 100° F. and the pulse was 84. Under an anæsthetic the pustule was excised and 40 cubic centimetres of Sclavo's serum were injected subcutaneously. The local and general condition of the girl improved rapidly, and she was made an out-patient on March 23rd. She was discharged on April 27th. This girl came to the hospital on March 21st, 1909, and on the forearm there was a thin depressed scar about the size of a florin.

CASE 5.—A schoolboy, aged 13 years, was admitted at 11 A.M. on August 23rd, 1908. The following history was obtained. After school hours the boy usually "took the tea" to one of the men employed by a hide and skin merchant, and he generally spent the afternoon helping the men in the warehouse. On August 20th he noticed a "heat spot" on the left side of the face. On the 22nd his face began to swell and he felt cold. On admission the tongue was clean; the temperature was 100·6° F., the pulse was 108, and the respirations were 24. The pustule was on the left cheek close to the angle of the jaw; the left side of the face and the upper part of the neck were swollen.

FIG. 3.



CASE 3.—Reproduction of photograph taken six months before fatal illness.

At 8 P.M., under an anæsthetic, 80 cubic centimetres of Sclavo's serum were injected under the skin of the abdomen. The pustule was not excised. At 10 P.M. the temperature was 101·6°. On the 24th the temperature was 99·4° and the pulse was 88; the œdema was much less and the boy's general condition had improved. On the 25th the pulse was 80, the temperature was 97·8°, and the respirations were 18. He complained of slight pains in the back and limbs and there was a rash on the chest and abdomen. The œdema of the face and neck was considerably diminished. The boy was made an out-patient on Sept. 2nd, and he was discharged on Oct. 16th. In reply to a postcard he came to the infirmary on March 18th, 1909; at the angle of the jaw there was a thick scar about a quarter of an inch long.

CASE 6.—A man, aged 55 years, was admitted at 1 P.M. on August 29th, 1908. This patient had not worked for several months, but his wife was a "condenser-minder" in a wool mill. The following history was obtained. On August 25th the patient washed a blouse usually worn by his wife to protect her clothing whilst at work. On the 26th he noticed a pimple on the right side of the face close to the eye, and on the following day his face was swollen. On admission the temperature was 98·6° F. and the pulse was 82. Over the right zygoma there was a necrotic patch about three-quarters of an inch in length and half an inch wide, surrounded by an extensive ring of vesicles. The right side of the face and neck was swollen and the right eye was closed. This was the largest malignant pustule that I have seen. At 3 P.M. 40 cubic centimetres of serum were injected subcutaneously and a boric acid fomentation was applied. The pustule was not excised. There was no reaction after the serum. The local and general condition of the patient improved rapidly and he felt quite well in a few days. He was made an out-patient on Sept. 12th and was discharged on Oct. 3rd. In reply to a post-card he came to the infirmary on March 18th, 1909. The scar, thin and depressed, was scarcely visible.

CASE 7.—A man, aged 44 years, a farmer and butcher, was admitted at 3 P.M. on Oct. 4th, 1908. About ten days before admission he received a scratch on the front of the left forearm. On Sept. 28th one of his cows died suddenly, and he skinned and cut up the carcass the same day. The meat was sold to the "neighbours" and the hide to a fellmonger. On admission the tongue was furred, the temperature was 103·3° F., the pulse was 92, and the respirations were 24. The whole of the left upper extremity was swollen, and on the front of the forearm, about 3 inches above the wrist, there was a typical anthrax pustule. There were several bullæ on the forearm; no enlarged glands were

FIG. 4.

CASE 7.—Reproduction of photograph taken Nov. 4th, at 2 P.M., shortly before death.

felt. He complained of headache and "cold shivers"; there was no history of vomiting. At 6 P.M. 40 cubic centimetres of Sclavo's serum were injected and the arm was placed in an izal bath. The pustule was not excised. On the 5th the temperature was 103·4°, the pulse was 92, and the respirations were 24. The arm was much worse; there were numerous bullæ on the forearm, and a few on the upper arm. There was no vomiting; the urine was free from albumin and sugar. At 12.30 P.M. 40 cubic centimetres were injected (10 cubic centimetres intravenously). At 5 P.M. I made three incisions along the front of the forearm and one in the back of the hand. The cut tissues were of a greyish colour and gelatinous. The temperature was 104° and the pulse was 110 (10 P.M.). On the 6th the temperature was 100·4° and the pulse was 104. The upper arm was incised and 30 cubic centimetres of serum were injected. He was rather better. On the 7th the temperature was 99·8° and the pulse was 88; the patient was better in every way. On the 8th there were signs of delirium tremens; the pulse was 80 and the temperature was 98°. I prescribed bromidia, one drachm every three hours. At 11 P.M. a quarter of a grain of morphia was injected. On the 9th at 1.30 A.M. the patient got up and pulled the bandages and dressing off. He became very violent and after

a struggle I injected half a grain of morphia into the left leg. He slept for several hours. On the 10th the temperature was 98° and the pulse was 70. The œdema of the arm was considerably diminished, but near the pustule a large area of skin showed signs of sloughing. The general condition of the patient was excellent. On removal of the gangrenous patch it was seen that some of the flexor tendons were going to slough. He would not consent to have the ulcer skin-grafted and he was made an out-patient on Oct. 31st. There is an ugly puckered scar just above the wrist and considerable impairment in the mobility of the fingers and hand.

As stated before, the carcass was sold to the neighbours at reduced prices, and probably over 100 persons partook of it. The patient and a butcher who assisted in dressing the carcass contracted external anthrax on the forearm, and one woman who handled the raw meat developed a malignant pustule on her face, but no case of intestinal anthrax was recorded. A second cow contracted the disease and was cremated in the orthodox fashion. The most probable source of infection was the dust from a willow machine in a mill being carried by the wind to the field in which the cows were pasturing. The butcher and the woman were treated by Dr. Leslie Milne, Mirfield, and both recovered.

CASE 8.—A man, aged 52 years, a rag-grinder, was admitted at 9 P.M. on March 13th, 1909. The following history was obtained. He was working on a "blend of merino and wool," and on March 9th he noticed a pimple on the front of the right forearm, a few inches above the wrist. On the 11th the sore was larger and the forearm was swollen; he went to work as usual. He vomited once on the 12th and noticed a "red ring" around the sore; there was some increase in the swelling. On admission the temperature was 100·6° F., and the pulse was 116; about 3 inches above the wrist there was a well-developed anthrax pustule; the forearm was swollen as far as the elbow; no enlarged glands were felt. He was perspiring freely. About 9.20 P.M. a swab was taken for bacteriological examination. On the 14th the temperature was 100·8°, and the pulse was 80. There was no change in the local condition. At 4 P.M. Sclavo's serum—40 cubic centimetres—was injected subcutaneously and a fomentation was applied to the forearm. The temperature at 5 P.M. was 101·8° and at 7.30 P.M. a second swab was taken for examination. On the 15th the temperature was 99·2° and the pulse was 82. The general condition of the patient was good; there was no change in the local condition. At 1 P.M. a third swab was taken. On the 16th the temperature and pulse were normal. The swelling of the forearm was much less. At 12.20 P.M. a fourth swab was taken. The patient left the hospital on the 23rd and was made an out-patient. On March 18th I received the following report from the Public Health Laboratory, Wakefield: "*Re* Specimens VI., Nos. 31, 32, 35, and 36. The culture obtained from Specimen VI., No. 31, received from you on Sunday, the 14th March, was inoculated into a guinea-pig and caused death 24 hours later, anthrax bacilli being recovered from the blood. I failed to find any anthrax bacilli in the specimens received 15th March (32), 15th March (35), 17th March (36)."

Remarks.—Before Sclavo published the results of his trials of serum-therapy, the treatment usually recommended in cases of external anthrax was excision of the necrotic patch and of the infiltrated tissues around, followed by the application of pure carbolic acid or the actual cautery. Since 1899 several cases have been treated successfully in Italy with serum alone, and during the last few years this method of treatment has been carried out in England, combined with excision or alone. Since 1905 nine cases of cutaneous anthrax were treated in the General Infirmary, Dewsbury: in four cases the pustule was excised and serum was injected, one case was treated with serum and three injections of carbolic acid solution, and four cases with serum alone. During the same period three cases were treated by private practitioners in Dewsbury: in two cases the pustule was excised and serum was injected; one case was treated with serum alone. Of the 12 cases one was fatal—8·3 per cent.

Case 1 was a virulent type of the disease; the patient received 190 cubic centimetres of serum in eight days, and his recovery must be attributed to it. In Case 3 the boy walked into the ward and undressed without assistance. After excision of the pustule œdema increased so rapidly that I regret not having treated the case with serum alone. Dr. Legge[1] states that "examination of the notes on 64 cases treated in St. Bartholomew's Hospital and Guy's Hospital shows that in 10 œdema increased after excision, and in a small number of the deaths in London hospitals generalisation of the disease followed so quickly after excision as to raise suspicion that they were connected." Case 7 was a very malignant type of the disease and the patient owes his recovery to Sclavo's serum, of which 110 cubic centimetres were administered in two days.

I am indebted to the visiting staff of the infirmary for permission to publish these cases.

Dewsbury.

LOCAL SEPSIS AS A FACTOR IN RHEUMATISM AND GOUT.

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AND

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THE microbic hypothesis of the origin of gout, rheumatism, and rheumatoid arthritis appears to be generally accepted in the recent literature of the subject. The distinction between the various forms of these diseases tends to disappear as it becomes more recognised that the many intermediate types shade off so gradually into each other that no sharp dividing line can be drawn between them. Radiography lends its support to this view. The plates of the various types are hardly to be differentiated without knowing the previous history. Elsewhere[2] our views as to the probable foci of infection have been explained, but a brief recapitulation may be useful. Our attention was called to the possibilities of an original septic cause for the above maladies some time ago, and since then we have made it a routine practice to examine every such case thoroughly for any possible local sepsis. In every case such a condition has been found. In the majority of adult cases pyorrhœa alveolaris is the most common initial lesion, tonsillar sepsis to a lesser degree, but still not infrequent. Nasal disease has also been found, but is very rare in comparison with the previous two in adults; but in children adenoids and septic tonsils are the prevailing septic foci. Not one single case of rheumatism or gout has been found without some accompanying local sepsis. Of course, this has long been realised in an inverted way, for "rheumatic tonsillitis" and "gouty gums" are among the most ancient of medical terms.

As stated above, there are various situations where the sepsis may originate. Most of them are well recognised and no description is needed either of their appearance or potentialities—most, but curiously enough not the one to which we believe the majority of cases occurring in adult life can be traced, i.e., pyorrhœa alveolaris. This paper will therefore deal principally with this form of septic infection. We wish it to be clearly understood, however, that it is not supposed to be either the sole source of infection in every case of these affections nor to give rise only to these particular diseases. On the contrary, it is allowed nowadays to be of the utmost importance in the anæmias and in many derangements of the digestive tract. This, however, is well recognised, while we venture to think that its rôle in the diseases here discussed has been overlooked.

The types and signs, therefore, of this particular infection may be briefly described. The term "pyorrhœa" has been used for the sake of brevity and convenience to indicate any form of oral sepsis. Strictly speaking, it should connote the presence of pus. Actual pus, however, is by no means invariably present. Pyorrhœa, then, used in a general sense, in this paper may indicate any of the following types. 1. The superficial inflammation around the teeth in ill-kept mouths, which, once restored to a healthy condition, can be kept in order by the patient's own efforts. 2. Pockets

[1] The Milroy Lectures on Industrial Anthrax, March 7th, 9th, and 14th, 1905, by T. M. Legge, M.D. Oxon., D.P.H. Cantab. See THE LANCET, March 25th, 1905, p. 765.

[2] Clinical Journal, February, 1909.

between the gum and tooth and osteitis of the bony sockets found on examination in apparently well-kept mouths. A characteristic odour can nearly always be detected in these cases. The patients themselves frequently complain of some alteration in, or loss of, taste, and of tenderness or aching of varying intensity due to exposure of dentine. 3. The genuine pyorrhœa, acute or chronic, where true pus can be squeezed from around the necks of infected teeth. 4. Dry osteitis, with absorption and recession of gums, which very frequently merges into 3. 5. Any combination of the above.

The formation of pockets of pus, leading to recession of gums, is invariably secondary to pyorrhœa and is due to the absorption of the supporting bone by chronic infective osteitis. Spongy and bleeding gums, and pus which can be expressed from the sockets, are all typical symptoms of this condition. Frequently the patient does not complain of toothache and many of the cases have quite good teeth. Caries is very often entirely absent. The exciting cause of pyorrhœa is not clear; possibly it is sometimes due to the tooth-brush as generally used. This is never surgically clean, and the stiff bristles must often lead to wounds of the gum around the tooth. Few people realise that no brush will clean the interstices of the teeth where food lodges and decomposes. Floss silk is the only means of removing this débris.

If we grant, then, that chronic sepsis may be a determining factor in the onset of a rheumatic or gouty attack, there are two questions which arise: 1. Is a chronic sepsis always present in these cases? 2. May a chronic sepsis exist without rheumatism or gout? To the first the answer, in our experience, so far is Yes. To the second, Yes, also. Until the bacteriology of the mouth is better known we cannot tell whether this may be due to a variation in the organisms or to soil resistance. We have an analogy in the case of diphtheria, where the Klebs-Löffler bacilli may exist in the air passages without giving rise to any symptoms. The next question is whether the attack consequent upon oral disease is due to absorption *viâ* the intestines or to local extension *viâ* the gum and bone. It appears to be possible in both ways. A very frequent result of the first cleaning of a septic mouth is an attack of rheumatism. It is not an invariable result, but seems to depend a good deal upon the amount of injury to the soft tissues in the cleaning manipulations. The attacks tend to disappear after the first few treatments. Other observers have noticed the correlation between these diseases and pyorrhœa but have not found it in every case. This may be due to the fact that it is quite unusual to find members of the dental profession who recognise the condition at all. Therefore it may be missed in a case where, to those who know how to look for it, there is abundant evidence of its presence. Again, it may be that the septic focus does not exist in the gums but in the nasal cavities or the naso-pharynx. In women, as Dr. W. P. Herringham has recently reminded us, the sepsis may be found in a chronic uterine or vaginal discharge. His paper is most suggestive, and this possibility should never be overlooked in a female patient.

In the treatment of these diseases it is obvious that our attention should first be directed to the septic trouble. Once this has been discovered, *if early enough*, or before general symptoms have developed, we may hope to benefit the case immensely. If, on the other hand, it is only noticed after years of illness, though it may, and should, be removed, yet we cannot hope as a general rule to do more than arrest the progress of the disease and alleviate pain. For, consider, if we grant that an inflamed joint is due to the fact of an organism settling there, there are two possibilities in the future history. One is that the germ, after setting up inflammation, dies, and no further trouble occurs unless a fresh invasion takes place. The other possibility is that the acute inflammation caused at the first onset dies down because of the attenuation of the virus or from other causes, but the microbe, having effected a lodgment, bides its time and multiplies locally, causing chronic irritation. In the first case we may evidently do good by checking the chance of fresh invasions; in the second only general treatment or surgical interference can be of any avail. Vaccines, except in cases where an unmixed infection is present, do not appear to be of much value. The answer, therefore, to those who hastily deny the possibility of this hypothesis and line of treatment is that there are the above modes in which the diseases may differ, and, once the second has taken place, cure, though possible, is only remotely probable, while in the first it is both possible and probable.

One great, possibly the greatest, difficulty is the length of treatment the gums require. Patients cannot realise that it is often practically impossible to cure the condition without removing teeth in order to isolate and render accessible for cleansing purposes those remaining. A so-called "cure" takes place by the dropping out of the teeth; but frequently the bone remains in a more or less diseased and inflamed state even when the mouth is edentulous. There can be no question that it is important, if only for the sake of the digestion and general health, to improve this local condition as far as possible, even though it may be too late to cure the gouty or rheumatic symptoms.

Let us now examine the various types of the rheumatic and gouty groups with the septic conditions found (see table).

These cases are not "selected" in any sense of the word. The trouble in some is of recent origin, in others of old standing. Nearly all, after thorough local treatment, have found themselves better in health than they have been for years. The treatment of some of these cases throughout has been entirely confined to the local cause of infection without general treatment. In others, general treatment has been concurrent with the local treatment. The local treatment adopted has been very careful cleansing of all teeth, gums, and pockets, avoiding as much as possible injury to the soft tissues. In cases where efficient drainage of pockets could not be obtained, extraction has been done, as it is much better to leave a tooth isolated, especially if it has a good opposing tooth for mastication, than to have a number of teeth on either side with foul septic pockets. In the very septic cases, when there was no hope of the teeth becoming firm under treatment, extensive extraction has been carried out.

In all cases of extraction, before operating, all the teeth and pockets have been, as far as possible, very carefully cleansed. This is a most important point, as very serious infection of bone and general septicæmia may follow extraction of septic teeth. In every case citric acid (3 drachms to the pint) dissolved in a warm solution of carbolic acid (1 in 40) is used as an antiseptic and astringent for the cleansing of the pockets. All the tartar is removed and the teeth and gums are swabbed round with the warm solution. Wisps of cotton wool soaked in the solution are carefully passed into any septic cavity by means of a sterile platinum probe. The process is very tedious, as it takes about an hour to clean a mouth thoroughly. About six visits are usually required for obtaining a good result. General and local improvement is generally marked after the first two or three visits. It is of interest to note that on the following day, subsequent to the local treatment, the symptoms are frequently worse, due to slight unavoidable injuries to the local tissue and consequent increase of local infection.

Having cleansed the mouth satisfactorily, and so removed the septic infection, it must be borne in mind that, except in cases of complete extraction or isolation of teeth, there must always remain pockets and sites for the accumulation of septic matter and subsequent re-infection. It is futile trying to make oneself believe that the pockets are cured, particularly in the great spaces between molars, consequently the patient must learn to clean the gums and the spaces between the teeth besides using the toothbrush; in other words, must begin for the first time to try to obtain a clean and healthy mouth. If in childhood it could be taught that it is absolutely essential, besides cleaning the enamel of the teeth, to clean the gums and spaces between teeth at night, the prevalence of septic and unhealthy mouths among cleanly and educated people would be avoided.

It is not suggested that local treatment is the only desideratum in every case of rheumatism or gout. In acute gout colchicum, and in rheumatism salicylates, must also be exhibited, while for the local conditions much may be done by means of radiant heat and electricity. These, however, are all directed to the relief of symptoms and do not strike at the root of the matter. Let us now go into a more detailed examination of a few selected cases.

Some Cases, with Details of Treatment.

CASE 1.—The patient, a man, aged 45 years, was seen on June 24th, 1909. He complained of general debility, rheumatism, and excessive tenderness of the feet whilst and after walking; in fact, he was unable to walk more than 400 yards without a stick. As regards local sepsis, there was pyorrhœa, with large pockets between the molars. Five or six of the back teeth had been lost. His mouth was treated, as explained above, six times in three weeks, an hour at a time being given to the process. The condition was then distinctly better, but he still complained of pain on walking. On July 19th the lower right wisdom tooth was removed. Very large pockets existed between it and the 12-year old molar. Marked improvement followed, and in a week he was able to walk a couple of miles without any pain. Another tooth had to be removed, but on Oct. 12th, in all a period of about three and a half months, he reported that he was practically well, felt better than for years past, and could walk five or six miles with ease. No other treatment of any kind except cleansing of the mouth was employed.

CASE 2.—The patient, a man, aged 35 years, complained of lumbago, rheumatism in the arms and legs, and general debility. He also showed signs of neurasthenia with vertigo and dizziness. Eustachian catarrh was present. As to local sepsis, there was pyorrhœa; the lower left molars were loose and badly infected. After careful cleaning with carbolic they

Gout.

No. of case.	Age in years.	—	Septic focus.
1	50	Acute attack in right tarso-metatarsal joint, great toe. Has had many attacks. This one followed three days after the commencement of a carbuncle on the neck.	Well-marked pyorrhœa.
2	33	Has had three attacks in past two years: two in right great toe, one in extensor brevis of right foot.	Pyorrhœa.
3	71	Repeated attacks, especially in great toe joints, for last 20 years. Has also had eczema.	,,
4	48	Repeated attacks. Last in right great toe.	Supra-tonsillar recess full of pus. Tonsils also septic.
5	29	Several attacks. Very susceptible to lead-poisoning.	Bad pyorrhœa.
6	56	Repeated attacks. Also rheumatic.	Pyorrhœa. Some artificial teeth. Plates very foul.
		Acute Rheumatism.	
7	20	Rheumatic fever 9 years ago.	Bad pyorrhœa.
8	49	Rheumatic fever 8 months ago. Double mitral disease.	Very bad pyorrhœa.
9	65	Rheumatic fever 3 times in 25 years. Another attack recently.	,,
10	5	Repeated attacks of subacute rheumatism, temperature running up to 105·5° F., pains in knees and elbows. Systolic bruit at apex.	Hypertrophied tonsils and adenoids.
11	30	Acute rheumatism.	Pyorrhœa.
		Rheumatoid Arthritis.	
12	62	Synovitis in right knee some years ago. Now has fluid in left knee; some crackling on movement.	Bad pyorrhœa.
13	56	Knee painful and creaks on movement.	Marked pyorrhœa.
14	53	Has had gouty symptoms in fingers. Slight eczema. Right shoulder and arm have been painful for one year.	Very marked pyorrhœa.
15	50	Fall on right shoulder five weeks ago. Muscles wasted, much creaking.	Pyorrhœa.
16	62	Rheumatoid arthritis of right shoulder.	,,
17	60	Sciatica. Rheumatoid arthritis of right hip.	Very bad pyorrhœa.
18	44	Pain in right shoulder since a fall. Rheumatoid arthritis.	Pyorrhœa.
19	26	Right shoulder painful and creaks.	Bad pyorrhœa.
20	42	Rheumatoid arthritis in several joints for some years.	Pyorrhœa.
21	26	Rheumatoid arthritis, specially in fingers and elbows. Much deformity.	Acute tonsillitis 18 months ago.
22	65	Neuritis in right arm, knees stiff and painful, crackling on movement.	Marked pyorrhœa.
23	37	Always having rheumatic pains. Left knee painful, crackling on movement.	,,
24	61	Lumbago. Sciatica. Joints creak on movement.	,,
		Various Allied Disorders.	
25	11½	Rheumatism in ankle. Occasionally complains of "rheumatics" in calves.	Tonsils septic.
26	25	Stiffness of right side of neck.	Hypertrophic rhinitis.
27	38	Sciatica and lumbago.	Pyorrhœa.
28	48	Rheumatism and sciatica. Neuritis in right arm.	Very bad pyorrhœa.
29	34	Rheumatism in right shoulder.	Pyorrhœa.
30	58	Neuritis. Rheumatism in arms and knees.	,,
31	50	Lumbago and neuritis.	,,
32	44	Rheumatism.	Bad pyorrhœa.
33	32	Neuritis and sciatica. Acute lumbago.	Pyorrhœa.
34	33	Sciatica, repeated attacks.	Enlarged and septic tonsils.
35	46	Lumbago, sciatica, and neuritis.	Pyorrhœa.
36	50	Rheumatism for many years. Sciatica.	Bad pyorrhœa.
37	56	Rheumatic pains in fingers and joints.	Pyorrhœa.
38	29	One attack of (?) gout at 13. Occasional muscular rheumatism. Tonsillitis 14 days ago.	,,
39	57	Pains in arm and shoulder of right side for three months. Several quinsies.	Very bad pyorrhœa.
40	36	Rheumatism in wrist two years ago. Temperature 100·2° F. Laid up for a fortnight.	Bad pyorrhœa.
41	32	Rheumatism and lumbago.	,,
42	45	Has always been rheumatic. Sciatica of the right leg.	,,

were removed. Subsequently the remaining teeth, with the exception of the lower canines, which were fairly firm and could be kept clean, were extracted also. No other treatment was adopted. As a result, all the symptoms originally complained of disappeared. A temporary denture was given in the last week in August, with which he was able to eat well. In October he had gained a stone in weight.

CASE 3.—The patient, a married woman, aged 60 years, had very bad attacks of muscular rheumatism and lumbago, with great difficulty in walking. She suffered from anæmia and there was general weakness. She was very susceptible to influenza, which usually lasted about three weeks. As to local sepsis, there was very bad pyorrhœa, only 15 teeth remaining. Six visits were made for cleansing, during which time the general health improved. All the teeth were removed in February except the lower canines. As a result there had been no rheumatism since, while there was a gain of one stone in weight.

CASE 4.—The patient, a man aged 40 years, had rheumatism in the right shoulder and was unable to play golf in consequence. He had had electrical treatment for a year. As to local sepsis, there was bad pyorrhœa, although the mouth was carefully kept. It was non-purulent in type, but with many pockets between the molars. Four visits were made of 1¼ hours each. The last visit was in June. In October the patient wrote to say that he has had absolutely no pain since the last treatment.

These cases are quoted to show that in certain cases cure is possible. We do not wish to suggest for a moment that the same result will occur in all, but the larger number of our cases have shown such definite improvement that we feel sure that early recognition of the source of infection is the main factor in the achievement of success. By more careful attention to the points that we have mentioned, either as a routine of life or on the first symptom of an attack, we feel sure that the number of cases of these illnesses could be limited to an extraordinary extent. It is much to be hoped that the younger generation of dental surgeons will realise that their art is not purely a mechanical one, but that they can do much towards preserving their patients from the so-called gouty and rheumatic diatheses. At present we have not succeeded in establishing a connexion between the types of pyorrhœa and the nature of the accompanying disease.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ABNORMALITY OF THE RIGHT TONSIL.

BY NORMAN PATTERSON, M.B., CH.B. EDIN., F.R.C.S. ENG.,
ASSISTANT SURGEON AT THE HOSPITAL FOR DISEASES OF THE THROAT, NOSE, AND EAR, GOLDEN-SQUARE, ETC.

THE patient, a woman aged 45 years, came to the hospital complaining of a peculiar appearance which she had accidentally noticed in the throat. She had never had any discomfort. She had been subject to epileptic fits, but never

remembered having had any pain or hæmorrhage from the throat after recovering consciousness. On examination a pointed process was seen projecting downwards and inwards from the right tonsil, as is shown in the accompanying illustration. When palpated it was felt to be a bony projection tipped with cartilage. It could be traced upwards towards the point at which the styloid process takes origin from the skull. On the left side, although no projection could be seen, what was evidently an elongated styloid process could be felt on pressing the tonsil outwards. The illustration shows both styloid processes to be abnormally long. It is difficult to say whether the condition is congenital or due to a fracture of the right styloid process having occurred during an epileptic seizure.

Queen Anne-street, W.

EYELASH AS A FOREIGN BODY IN THE ANTERIOR CHAMBER.

BY J. B. PIKE, M.R.C.S. ENG., L.R.C.P. EDIN.,
HONORARY SURGEON TO THE LOUGHBOROUGH GENERAL HOSPITAL.

A BOY, aged 13 years, attended as an out-patient at the Loughborough Hospital on May 6th, 1907. A small healed wound was found at the outer edge of the cornea of the right eye. There had been slight reaction, but this was subsiding, the injury being a fortnight old. A dark line was seen lying obliquely across the pupil and inner part of the iris. The ophthalmoscope showed this to be a foreign body. The boy stated that the injury was caused by a branch of a hedge swinging back and striking the outer part of his eye. I thought some small thorn spicule might have penetrated. On the following day with general anæsthesia I made a small incision at the inner sclero-corneal junction with a Graefe knife, and by means of an iris hook and forceps removed the foreign body. At the same time a small iridectomy was done. The foreign body under a low microscope power proved to be an eyelash. Two years after this the vision is found to equal 6/6, with or without a small correction for hypermetropia and astigmatism.

Loughborough.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Exhibition of Specimens.—Rupture of the Uterus.—Leukoplakia Vulvitis.

A MEETING of this section was held on Nov. 11th, Dr. H. MACNAUGHTON-JONES, the President, being in the chair.

Dr. A. E. GILES showed: (1) A specimen of Ovarian Adeno-Carcinoma weighing 18 pounds, removed from a widow aged 60 years; and (2) a case of Kraurosis of the Vulva of an advanced type, in which a small nodule of carcinomatous growth was just beginning.

Dr. T. G. STEVENS showed a specimen of Adeno-Myoma of the Vaginal Wall, consisting of two tumours, one situated on the anterior and the other on the posterior vaginal wall. Both contained cystic spaces lined by columnar epithelium, and he thought from their position and structure that they must be derived from displaced Wolffian tubules. He also showed a specimen of Fibromyoma and Pregnancy with extensive thrombosis of all the veins of the capsule and necrobiosis of many areas of the tumour.

Mr. H. J. PATERSON read a short communication on a case of Rupture of the Uterus treated by suture of the rent per vaginam and drainage. The patient, a iii.-para, after premature rupture of the membranes was found to have a prolapsed pulseless cord. Delivery was effected by traction on the foot without difficulty, but on introducing the hand into the vagina after delivery it passed into the abdominal cavity. On admission to the Temperance Hospital the patient was profoundly collapsed. The vagina was full of blood clot, and a coil of intestine was felt protruding through a large rent in the vaginal vault, through which the fist could be easily passed into the peritoneal cavity. The left parametrium was involved in the tear, and there was free bleeding from two large vessels. These were secured by ligature. Further examination showed that the cervix and lower uterine segment were torn through for four inches, but as the uterus appeared firmly retracted no attempt was made to define accurately the upper limit of the tear. The torn edges of the cervix and

lower part of the uterus were approximated by three catgut sutures. A large rubber drainage-tube was passed into Douglas's pouch and the torn edges of the peritoneum and the vaginal wall were drawn together round it by a purse-string suture. The patient was much collapsed at the end of the operation, but continuous saline proctolysis was maintained for 60 hours, and she ultimately made a good recovery. Mr. Paterson said, as far as he knew, this method of vaginal suture and drainage had not been adopted in any of the recorded cases of rupture of the uterus. He thought that some writers laid too much stress on the difficulty of controlling hæmorrhage and nature's ability to deal with internal hæmorrhage. Suture when possible was to be preferred to hysterectomy, and the cases recorded seemed to show that some of them had recovered in spite of hysterectomy rather than on account of it.

Dr. COMYNS BERKELEY and Dr. VICTOR BONNEY read a paper on Leukoplakic Vulvitis and its Relation to Kraurosis Vulvæ and Carcinoma Vulvæ. The authors pointed out that leukoplakia and kraurosis were two distinct diseases, which could be identified quite easily both from clinical observation and a pathological examination of the tissues affected. The authors based their paper on the series of 24 cases which they had operated upon and 75 which had occurred in the practice of their colleagues at the Middlesex Hospital and Chelsea Hospital for Women. The authors pointed out that leukoplakia can be differentiated clinically from kraurosis: 1. By its appearance, which is quite different from that of kraurosis. 2. By its distribution, in that it never affects the vestibule, orifice of the urethra, or vagina, whereas in kraurosis these areas are always affected; and whilst in the latter disease the outer surface of the labia majora and the skin of the thighs and the perineum in their neighbourhood are never affected, in the former disease it is often involved. 3. By the symptoms, for whereas the striking and often the only symptom of leukoplakia is pruritus, this symptom is absent in kraurosis, whilst dysuria and dyspareunia are most marked. 4. By its relation to carcinoma. Leukoplakia is often followed by carcinoma of the vulva, and in every case of this disease which the authors had seen leukoplakia had been present, whilst kraurosis had no relation to carcinoma. 5. By its histological findings. It will be seen that in leukoplakic vulvitis there occurs a diffuse thickening of the epithelial elements with a marked tendency to downgrowth, as exhibited by long interpapillar processes. The underlying connective tissue is at first the seat of a lymphocytal aggregation, which leads on to a diffuse fibrosis with a total disappearance of yellow elastic fibres in the zone immediately underlying the epithelium. In kraurosis the epithelium is abnormally thin, especially over the red patches seen in that disease. Polymorphonuclear leucocytes and massive aggregations of plasma cells are seen, whilst lymphocytes are comparatively sparsely represented. The connective tissue becomes the seat of an atrophic shrinkage, but except at the points of massive plasma cell proliferation, no disappearance of the yellow elastic tissue occurs. The authors lastly discussed the relationship of leukoplakia to carcinoma, including multiple carcinoma of the vulva, recurrences of the growth, and glandular metastases. With regard to treatment, the authors were strongly of the opinion that all the cases of leukoplakic vulvitis should be treated by excision, because this disease in their experience had been so commonly followed by carcinoma. The paper was illustrated by a series of micro-photographs demonstrated by the epidiascope.—Dr. GILES said that there was no evidence in any case of kraurosis which had come under his notice of a history of either syphilis or tubercle, but he regarded the condition as an atrophic one incidental to the general atrophy affecting the pelvic organs at the menopause.—Dr. AMAND ROUTH agreed that the authors had brought forward very strong arguments in favour of their contention that leukoplakia and kraurosis vulvæ were essentially distinct conditions, capable of easy clinical differentiation. If their contention were correct all modern text-books were wrong, for without exception they described the two conditions under one name—kraurosis vulvæ. According to the authors, in leukoplakia, pruritus was the main, often the only, symptom, neither the vestibule nor the urethral orifice was ever attacked, but the disease tended to spread over the inner thighs, perineum and anus, and there was no tendency to contraction of the vaginal orifice. Epithelioma of the vulva very often followed this condition. In kraurosis vulvæ, on the other hand, there was no pruritus, and dyspareunia was the main symptom. The vestibule and urethral orifice were always attacked, the thighs, perineum, and anal region never. The vaginal orifice always became contracted, and carcinoma never developed on the vulva in kraurosis. He described a case, however, to prove that if leukoplakia and kraurosis were not two stages of the same disease, they sometimes co-existed. As regards treatment, he had found that the continued application of equal parts of unguentum hydrargyri and unguentum zinci or unguentum plumbi acetatis almost always relieved the pruritus and made the tissues softer and pinker, but the condition was apt to recur. He had not seen any case with a definite history of syphilis.—Dr. T. W. EDEN said that there was nothing inherently improbable in the idea that leukoplakia was a condition antecedent to epithelioma, for this sequence had been recognised for long in the tongue. He could hardly follow the authors in their recommendation to excise all patches of leukoplakia, since this condition was not at all uncommon, while the malignant transformation described in the paper was comparatively rare.—The PRESIDENT said that the last edition of his text-book was open to the criticism of Dr. Routh, for although the views of many authorities were epitomised, there was no mention of leukoplakia. The two conditions were dealt with under the one term, kraurosis. His experience led him to regard discharge—both uterine and vaginal, and senility, as important factors in the etiology. No patient he had treated had he known to suffer from carcinoma subsequently. He believed in free excision of the "wash-leather" areas, though not to the exclusion of other therapeutic measures such as the application of pure carbolic acid and the use of a 5 per cent. solution of nitrate of silver. He also recommended adrenalin, the use of lanolated ichthyol ointment, and yellow oxide of mercury, with emollient baths, followed by the application of the nitrate of silver. He quoted two cases cured by excision and transplantation of sound skin, combined with the use of the remedies mentioned. He believed that while nothing save excision would suffice in certain cases, yet in others cure could be effected without resource to this severe measure.—Dr. BERKELEY, in reply, said that the discussion of the paper had mainly had reference to two points—namely, the ease or otherwise of the diagnosis of these two conditions and the question of the treatment of leukoplakic vulvitis by excision. In reality the two diseases were easy to diagnose, and it was their marked difference which had drawn his and Dr. Bonney's attention to this subject. With regard to treatment, they were convinced that the proper treatment was to excise the diseased areas. He had had the unusual experience of operating upon 18 cases of carcinoma of the vulva all associated with leukoplakia, and at least three of these had been subjected to prolonged treatment for the leukoplakia. He saw no reason why leukoplakia and kraurosis should not occur in the same patient.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.—Strangulation of the Small Intestine.

A MEETING of this section was held on Nov. 26th, Dr. J. PORTER PARKINSON being in the chair.

Dr. A. E. GARROD showed a case of Multiple Peripheral Neuritis in a girl, aged 8 years, who was quite healthy until March, 1909, when she passed involuntarily a stool containing several ounces of blood. This was preceded by an attack of abdominal pain. A similar attack occurred in May, and several others later. When admitted to hospital on Sept. 16th she was a well-nourished child; good mental condition; marked loss of power in both upper limbs from deltoid downwards, and double wrist drop; muscles of lower limbs weak; no tremor; sensation unimpaired; other systems normal. Electrical reaction showed muscles of all extremities with reaction of degeneration (except flexors and special muscles of thumb and little finger). Blood examination: red corpuscles, 4,984,000; hæmoglobin, 94 per cent.; white cells, 10,500. No cause for the condition was discoverable.—Dr. G. A. SUTHERLAND regarded the case as one of special interest, and thought a certain positive diagnosis was not possible.—Dr. E. I. SPRIGGS referred to two similar cases shown at the last meeting.

Dr. ROBERT HUTCHISON showed two cases, one a Female Child, aged 9 years, with Cirrhosis of the Liver. There had been swelling of the abdomen for one year; no previous illness of importance. Two still-births preceded this child. There were snuffles as a baby. The liver was enlarged and irregular, and the spleen considerably enlarged. There was some ascites; the child had a cirrhotic facies. Dr. Hutchison took the view that the condition was due to syphilis and stated that a positive Wassermann reaction had been obtained. The other case was one of Unidactyly in a male, aged 13 weeks. The small digit only was present on both hands and both feet. The child was otherwise normal. The child's father, two uncles, and an aunt were similarly affected, as also the grandfather and his brother. A daughter of the father's sister also exhibited the condition.—Dr. PARKINSON, Dr. C. W. CHAPMAN, Dr. SUTHERLAND, and Dr. GARROD discussed the cases.

Mr. O. L. ADDISON showed a case of Congenital Enlargement of One Limb occurring in Brother and Sister, aged 9 and 5 years respectively. The boy's arm, shoulder, and hand were enlarged, and there was one inch increase in length. In the girl the enlargement was in the left leg, which was an inch and three-quarters increase in length. The calf was relatively larger than the thigh, and was hotter than the rest of the limb.—The cases were discussed by Dr. F. PARKES WEBER, Mr. J. P. L. MUMMERY, and Dr. GARROD.

Dr. R. C. JEWESBURY exhibited a specimen of an Infantile Heart showing Nodules on the Endocardium. The specimen was from a child, aged 4 months, who died from bronchopneumonia. No cardiac lesion was detected during life. Post mortem, a large number of wart-like nodules were found, especially on the mitral and aortic valves, a few also on the other valves and on the septum of the foramen ovale. Microscopical sections through the nodules showed a connective tissue substratum supporting a layer of epithelium. There were no signs of recent or previous inflammation. There was nothing to suggest that the nodules were "vegetations," and it was stated that the condition occurred normally in the infant heart.—Dr. SPRIGGS regarded the nodules as hypertrophy of the little nodules usually seen in infants' hearts.

Dr. H. D. ROLLESTON (for Dr. CARPENTER) exhibited a specimen of Compression of the Trachea by the Enlarged Thymus. The specimen was removed from a child, 10 months old, who died after an illness of less than 24 hours, which began with quick breathing and sickness. The temperature reached 103°F. and the respiration rate 80. During life there were recession of the intercostal spaces and embarrassed breathing. The specimen showed a large thymus pressing on the trachea, which was much narrowed from before backwards. The lungs showed evidence of death from asphyxia. The liver and spleen showed some fatty change but the other organs were normal. The case was shown as positive evidence that an enlarged thymus may cause death. He also showed a Microscopical Section from the Liver of a case of Icterus in an infant. The specimen showed a normal condition of the liver.

Mr. MUMMERY read a paper on a case of Strangulation of the Small Intestine by a Band in a child, aged 15 months. The child had acute obstruction, which developed suddenly, and was operated upon within nine hours of the onset of symptoms. A tumour, which was thought to be an intussusception, was distinctly felt in the right side of the abdomen. The child had been operated upon for intussusception when five months old. On opening the abdomen a loop of small bowel was found acutely strangulated by a narrow band. The band was divided and the abdomen closed. The child made an uninterrupted recovery.

HARVEIAN SOCIETY OF LONDON.

Discussion on Angina Pectoris.

A MEETING of this society was held on Nov. 25th, Dr. C. BUTTAR, the President, being in the chair.

Dr. ALEXANDER MORISON read a paper on the Nature and Treatment of Angina Pectoris. He remarked that if the term were used comprehensively as applying to all forms of cardiac pain the condition was not rare, but if limited to classical cases, usually without valvular disease, he could understand the fact mentioned by Stokes of Dublin that he had never seen a case. Dr. Morison, however, would treat the condition more comprehensively, and defined angina pectoris as a painful affection of the heart as a whole, dependent upon disorganisation in the anatomical character or disorder in the physiological function of one or more of the factors in cardiac action, and associated in some cases with a fear of impending death. He gave a short abstract of 10 cases as supplying the data upon which he rested his conclusions regarding the nature of the affection, instancing cases both of dextral and sinistral radiation of the pain. The conclusion he arrived at was that the character and situation of the conditions which originate angina vary, and that the heart, if like other viscera, endowed with low sensibility to handling and other modes of external irritation under normal circumstances, may, in the presence of lesion of its internal surfaces or severe stimulation of its nervous endowment by compression or otherwise, reveal evidences of sensibility as well marked as do other viscera in their interior under circumstances which may be regarded as analogous. He argued that even the commencement of referred pain in a peripheral portion, such as the arm, in no way invalidated the belief that intra-aortic or intracardial nerves were not also the seat and site of referred pain. In speaking of treatment, he divided his remarks into a consideration of the treatment (1) of the attacks, and (2) of the conditions which provoked the attacks, and pointed out that the majority of cases of so-called vaso-motor angina with valvular disease tended to subside without accident so far as the attack was concerned. This was not so with non-valvular cases, which might rapidly terminate fatally, and required, not merely the use of nitrites, but also of morphia, atropine, and general anæsthesia for relief and to avert death. At the close of his remarks Dr. Morison showed a patient upon whom thoracostomy had been performed with benefit for cardiac pain. An account of this case has already appeared in THE LANCET of July 4th, 1908, and Nov. 20th, 1909.

Sir CLIFFORD ALLBUTT said that to properly understand the nature of angina pectoris it was necessary to consider cases that were not complicated. He considered that the cause of uncomplicated cases of angina pectoris was disease of the aorta above the valves, and he thought that the distribution of the radiating pain depended largely on the part of the aorta affected. He thought that there was a pain arising from the heart itself, and situated in the præcordial area, which was quite distinct in character from the pain of a typical anginal attack. He insisted on the importance of early specific treatment in cases of angina pectoris.

Sir R. DOUGLAS POWELL considered that cases of typical angina pectoris were due to atheroma and thrombosis of the coronary arteries. He would not class as "angina" mere aortic pain following exertion. He considered rise of arterial blood pressure an important factor in the causation of angina pectoris, and gave instances of cases in which the development of mitral regurgitation had caused relief from anginal attacks.

Sir LAUDER BRUNTON thought that the pain of angina pectoris was partly due to contraction and he compared the pain to the contraction of a distended bladder. He considered that there was a sensory nerve-supply to the heart, and cited the results of experiments on animals in support of this. He thought that the pain of angina pectoris was due in some cases to increase of arterial blood pressure; in other cases spasm of the coronary arteries was an important factor. He laid stress on the importance of careful regulation of exercise in angina pectoris and also on the advisability of rest after a meal.

Dr. JAMES MACKENZIE thought that the symptoms of angina pectoris should be carefully understood and that the distribution of the pain should be carefully investigated. He thought that irregularities of the heart were important, and also that great exhaustion of the heart muscle was usually present in anginal attacks.

Dr. D. B. LEES said that many of the attacks of so-called angina pectoris were not really typical. He thought that a very important confirmatory physical sign was a dilated aorta, and emphasised the importance of a careful examination by percussion. He considered that excessive indulgence in tobacco-smoking was a very important factor in the causation of angina pectoris. He said that investigation of the nerve plexuses about the aorta was very necessary before the pathology of angina pectoris was properly understood.

Dr. E. H. COLBECK considered that "pain in the heart" was the main factor in the symptoms of an anginal attack. He thought that any theory of explanation of the condition must account for the fear of impending death.

Sir JOHN BROADBENT said that there was a great deal still to be learnt about the etiology and pathology of angina pectoris. He thought that most attacks were due to a spasm of the vessels induced by cold and exertion.

Dr. W. BEZLY THORNE thought that distension of the heart was the true cause of angina pectoris. He spoke of the presence of tender areas at the apex beat, over the third left costal cartilage, and over the lower part of the sternum. He advocated the use of blisters here in the treatment of the condition.

Dr. W. EWART considered that the influence of respiration on angina pectoris was not sufficiently taken into account. He thought it was possible that spasm of the diaphragm might in certain cases account for some of the pain present in an anginal attack.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held at the Great Northern Central Hospital on Nov. 11th, Dr. James Crabb, the President, being in the chair.—Dr. Thomas J. Horder showed a case of Hæmophilia occurring in a child, aged 19 months, who had shown a tendency to bleed excessively since birth. The parents, who were first-cousins, showed no history of hæmophilia on either side. The patient had one brother and one sister, the latter, aged four years, being a hæmophiliac.—Mr. G. B. Mower White showed a case of Hæmophilia, the patient being a boy, aged 13 years, who had been admitted to hospital with a swelling of the knee-joint of four months duration. The swelling had come on after a slight twist, and was found to consist of blood-stained synovial fluid. The blood when withdrawn did not coagulate for three-quarters of an hour, and the clots which were formed were small and shreddy. The boy was not anæmic and his blood-count was normal. It was stated that when he was an infant a cut on his head bled for three weeks, and that after the extraction of a tooth he continued to bleed for a week. He had had occasional attacks of pain and swelling of both knee-joints, and it had been noticed that he bruised quickly and over a large area after a blow. His family history showed nothing of interest.—Dr. C. M. Hinds Howell showed, for Dr. Horder, a case of Atrophy of Some of the Muscles of the Neck in a child, aged 7 years. The condition had begun a year ago during an acute attack of tonsillitis. The sterno-mastoids and trapezii were wasted and there was weakness of extension and rotation movements. Passive movements were fairly free. There was cervical scoliosis with the convexity to the left, and a skiagram by Dr. Lewis Jones showed a slight malposition of the axis with regard to the atlas. On attempting to rotate the head or to open the mouth widely the platysma was thrown into strong contraction. There was no wasting or weakness of the muscles of the extremities, and all the deep reflexes were present though diminished. There were no electrical changes in the mastoid muscles.—Dr. Hinds Howell and Dr. T. J. T. McHattie showed a woman who had been under observation for nine months suffering from Cerebral Symptoms of a Mixed Functional and Organic Nature, such as rendered a diagnosis of the actual lesion a matter of great difficulty. There had been constant headache, sickness, and giddiness, which had persisted in spite of treatment since last December, and had followed a blow on the head from a saucepan. Combined with these symptoms there were nystagmus, tinnitus, and nerve deafness on the right side, and complete loss of the power of smell and taste on the same side. The patient complained of almost total blindness in the right eye, though both disc and fundus were normal, and when tested with a prism applied to the right eye she was found to have 6/18 vision and to see double. There was distinct weakness of the lower facial muscles on the left side and of the muscles of the limbs on the right side. There was right partial hemianæsthesia, crossing the middle line by about 1 inch, as well as loss of sense of position of the limbs. Her reflexes were brisk, the plantar reflex on the left side was flexor, while that on the right side could not be obtained. Her gait at present was normal, though there had been a tendency to drag the right foot. When standing with her eyes shut she tended to fall to the left. Dr. Howell was of opinion that the symptoms were mostly of a functional nature, though he thought that a tumour in the right temporo-sphenoidal region might account for the deafness and the loss of power on the left side of the face.—Mr. Mower White said that the case reminded him of a man whom he had seen some years ago, and who was found wandering about, anæsthetic on the left side, and unable to speak. He was sent into a lunatic asylum. The functional nature of his complaint was discovered when it was found that, his right hand being held, he was able to button up his coat with his left anæsthetic hand. Playing in a cricket match he was bowled with the first ball, exclaimed "D——," and from that moment was well.—Dr. McHattie showed a man, aged 63 years, in whom there was Motor Aphasia, combined with paralysis of the face, arm, and hand, and partial paralysis of the leg on the right side. The patient was able to repeat one or two familiar words, could sing in correct time, could read, and, though somewhat dull mentally, was obviously able to understand what was said to him. The onset had been gradual, and Dr. McHattie thought that it had probably been caused by a thrombosis of the middle cerebral artery, involving the cortex in the region of Broca's convolution.—Other cases and specimens were shown by Dr. B. G. Morison and Mr. Ernest H. Shaw.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Sheffield on Nov. 19th, Dr. J. W. Martin (Sheffield), the President, being in the chair.—Dr. A. Donald (Manchester) read notes of a case of Wertheim's operation for Advanced Cancer of the Cervix, which was followed by uræmia. Only 4 ounces of urine were passed on the first two days, and none at all on the third; on the fourth and fifth 62 and 120 ounces respectively were passed, and the patient appeared to be making good progress. On the sixth day coma set in, and death occurred a few days later. At the post-mortem examination the right kidney was found to be the seat of old cystic disease and to contain but little secreting tissue, whilst the left ureter had been constricted by a ligature. The left kidney was engorged but appeared to have been healthy before the operation.—Dr. H. Briggs (Liverpool) recorded a case in which he had removed a Pyosalpinx, on account of pelvic pain of a month's duration, from a 2-gravida who was two months pregnant. The operation was performed three weeks ago, and the pregnancy was apparently undisturbed. Dr. Briggs also gave the details of a case of old-standing, Left-sided Pyosalpinx, for which the patient had refused operation three years previously. She improved and bore two children, but during the last nine months several attacks of pelvic pain had occurred. Recently the left ovary and the tube, which contained pus, had been removed.—Mr. Percival E. Barber (Sheffield) read the notes of a case in which he had performed total abdominal hysterectomy for Placenta Prævia Centralis. The patient, a 4-gravida, had been losing blood for a week before admission to hospital. Vaginal examination caused profuse hæmorrhage, which necessitated plugging the cervix and vagina. When Mr. Barber saw the patient she was blanched and apparently moribund; the pulse-rate was 140. The uterus, containing a dead full-time child, was removed. Two pints of saline were infused intravenously. The patient made a good recovery.—The following specimens were shown:—Dr. D. Lloyd Roberts (Manchester): A Uterus which he had removed for Malignant Disease of the Corpus. It was found to contain a fibroid polypus the base of which was invaded by glandular carcinoma arising from the neighbouring endometrium. The apex of the polypus was quite free from malignant disease. The patient was a multipara, aged 65 years, who had ceased to menstruate at 50 years. For three months there had been almost constant hæmorrhage, with, on three occasions, floodings accompanied by severe pain.—Dr. J. E. Gemmell (Liverpool): A Sarcoma of the Mesentery which clinically had simulated an ovarian cyst with long pedicle.—Dr. W. E. Fothergill thought the microscopical appearances were those of a perithelioma.—Mr. R. V. Favell (Sheffield): A round cell Sarcoma of the Vagina, removed from a single woman, aged 25 years. The hard nodular growth was easily enucleated and removed with its covering of vaginal wall.—Mr. P. E. Barber: A full-time Ectopic Gestation Sac, which had been successfully removed from a multipara, aged 34 years. Soon after the commencement

of the period of nine months' amenorrhœa she had experienced a sudden attack of right-sided pelvic pain with a feeling of faintness; this was not accompanied by external hæmorrhage. The fœtal movements, which had been very violent and painful, had ceased six weeks before admission. There was no history of spurious labour pains. The sutures of the softened fœtal head could be easily felt through the thin abdominal wall and the state of affairs was readily diagnosed. The sac, which was largely extra-peritoneal, was removed entire with the body of the uterus, to which it was intimately united. The left appendages were normal. The right could not be discovered either at the operation or on later examination of the specimen. The right round ligament ran into the sac. The placenta, greatly thickened by blood clot, was attached to the back of the uterus and to the tissues at the base of the right broad ligament.—Mr. Barber also showed a Uterus with a Right Tuberculous Pyosalpinx and a Left Tuberculous Tubo-ovarian Swelling. A nodule of caseating material enlarged the right angle of the uterus around the interstitial portion of the tube.—Sir William J. Sinclair showed Long Sea-tangle Tents suitable for the induction of labour. The tents were six or seven inches in length. Similar ones had already been used with good results in several cases.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on Nov. 17th, Mr. Frank Marsh, the President, being in the chair.—Mr. William Billington showed a child, 2½ years old, all of whose nails resembled claws. The child was the sixth of a family of seven, the rest of whom were normal. The family history was negative. The fingers and toes were perfectly natural and showed no trophic disturbance. Each nail closely resembled the claw of a dog, being raised, almost black in colour, very hard, and projecting some distance beyond the extremity of the digit.—Mr. C. A. Leedham-Green showed a young woman with a large intermittent Hydro-nephrosis of the Right Kidney. Some six years previously the left kidney was removed for advanced pyo-nephrosis. At that time there was no evidence of any trouble on the right side. Gradually a hydronephrosis had developed in the remaining kidney and was slowly destroying it. The pressure of the fluid was causing such atrophy of the glandular tissue that signs of renal inadequacy were becoming manifest. A radiograph was shown, clearly indicating the size and relation of the cystic swelling. For the purpose of the radiography a catheter had been passed up the ureter and the cyst distended with a solution of collargol.—Dr. O. J. Kauffman showed a case of Syringomyelia of seven years standing in a girl aged 15 years. The symptoms were muscular atrophy of the right hand, forearm, and deltoid, and spastic paralysis of the legs, left hemianæsthesia up to the level of the third cervical segment, coupled with hemianalgesia and thermanæsthesia in the same area. Tactile anæsthesia, analgesia, and thermanæsthesia were present in the right arm, though the right leg and the right half of the trunk showed no distinct anæsthesia. The right pupil and palpebral fissure were smaller than the left, and there was very marked kyphosis of the cervico-dorsal region coupled with scoliosis below. No trophic joint lesion was present, but there was a great tendency to almost painless sores on the right limbs and the right buttock. The onset and progress were absolutely gradual and without the slightest history of pain at any time.—Mr. F. Victor Milward showed a case of Rupture of a Branch of the Superior Mesenteric Artery in a man aged 49 years. The hæmorrhage was excessive but the pulse-rate was never more than 70. Great difficulty was experienced in locating the torn vessel, and five pints of normal saline solution were infused into the internal saphenous vein. Ultimately recovery was uneventful.—Dr. Smallwood Savage showed a large Hydrocephalic Fœtus which had caused an obstructed labour. The patient was admitted into the Birmingham Maternity Hospital with the body and limbs of the fœtus hanging outside the vulva, but the large head, reaching 3 inches above her unbilicus, obstructing the complete delivery. An incision was made over the cervical spine, a trocar and cannula were inserted into the brain, and 3 pints of cerebro-spinal fluid were withdrawn. The collapsed head was then delivered with ease.—Dr. Thomas S. Short showed a specimen of a Thoracic Aortic Aneurysm with a sac measuring 6 inches by 5, taken from a man aged 56 years. It had exerted pressure on the trachea and œsophagus and eventually caused death by rupture into the right pleural cavity. The acute symptoms had existed for ten days only, and throughout the whole history of the case there had been a complete absence of pain.—Mr. J. Hall-Edwards exhibited a new apparatus for electrical treatment and massage (netama). Its chief novelty consisted of an interrupter which could be regulated to make and break the current at measured intervals. It was claimed that the current was directed more deeply into the tissues than usual and that the muscle-contractions were stronger. The strength of the current could be regulated with precision.—Other cases and specimens were shown by Dr. J. G. Emanuel, Dr. J. E. H. Sawyer, Dr. J. Douglas Stanley, Dr. Charles E. Parslow, and Dr. H. Beckwith Whitehouse.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—A meeting of this society was held on Nov. 5th, Mr. A. E. Maylard being in the chair.—Dr. W. S. Syme showed a patient with Polypus of the Vocal Cord.—Dr. S. J. Cameron described an operation devised to facilitate the Removal of the Appendages in Chronic Salpingitis, and showed illustrative drawings.—Mr. H. Rutherfurd showed three interesting specimens illustrative of Gangrenous Hernia from cases of Richter's Hernia, Inguinal Hernia, and Obturator Hernia.—Dr. G. A. Allan read notes on two cases of Dextrocardia. The first was the case of a patient suffering from mitral disease, in whom it was found that the apex beat was situated in the sixth interspace, seven inches to the right of the midsternum. The liver, stomach, and spleen were found to be likewise transposed. The patient died, and at the necropsy a transposition of the viscera implicating the thoracic and abdominal organs in every detail was found. The second case was that of a patient with left hæmopneumothorax, in whom the cardiac dulness and pulsation were found to be displaced to the right of the sternum. The patient recovered, and in six weeks the heart had regained its normal situation. The cause of the hæmopneumothorax was not obvious. There had been no injury and no evidence of phthisis or other pulmonary disease could be discovered. The condition came on suddenly when the patient was enjoying apparently good health.—Dr. W. K. Hunter showed Blood Films from a case of Acute Hæmorrhagic Leukæmia. The patient, a woman, aged 22 years, dated her illness from a bleeding from the gums four weeks previously. A fortnight later blood appeared in the urine and had persisted. There was no history of blood in the motions or of bleeding into the skin. On admission to hospital the patient looked very ill; the temperature was 100° F., the pulse was 120; the skin and mucous membranes were pale; there was bleeding from the gums; the breath was offensive; there were a few bluish markings on the skin like slight bruise marks; the urine resembled blood serum. There was no enlargement of the liver, spleen, or lymphatic glands; the heart apparently was normal; there was slight dulness at the left base, with scanty moist râle; no expectoration. Blood condition: red corpuscles, 2,680,000; white corpuscles, 59,375 per cubic millimetre; hæmoglobin, 45 per cent.; a little poikilocytosis; many nucleated red cells, about 2 per cent. of white cells. The great majority of the white cells were medium-sized mononuclear cells with fairly well stained nucleus and less deeply stained plasma. In a proportion of these cells (with Leishman's stain) the plasma had a rather leaden tint; in others were granules stained the same tint as the cell nucleus. In films stained with methylene blue only these granules stained blue. There were no typical "large lymphocytes"—i.e., cells with large pale nucleus and rim of darker stained plasma—only an occasional neutrophile marrow cell. Differential count: polynuclear cells, 4 per cent.; small lymphocytes, 15 per cent.; mononuclears, 79 per cent.; neutrophile marrow cells, 2 per cent. The patient lived eight days after this blood count, having been ill apparently about five weeks in all. Of special interest in the case were: (1) the hæmaturia, a rare symptom in leukæmia; (2) the preponderance of mononuclear cells, which were neither typical large lymphocytes nor neutrophile marrow cells, a feature which made it doubtful whether the case should be classed as a lymphatic or a myelogenous leukæmia. Dr. Hunter referred to a similar case reported by Fiessinger and Pierre-Louis Marie in *La Tribune Médicale* of Jan. 16th, 1909.—Dr. J. Wyllie Nicol showed Wax Casts made from patients suffering from various skin diseases. The casts were

made with the assistance of Mr. A. Kirkpatrick Maxwell, who did the colouring.

UNITED SERVICES MEDICAL SOCIETY.—A clinical meeting of this society was held at the Royal Army Medical College on Nov. 10th, Sir Alfred Keogh, K.C.B., Director-General, A.M.S., being in the chair.—Captain C. C. Cumming, R.A.M.C., showed a case of Heat Stroke invalided from India. The onset was sudden and after an interval of 36 hours' unconsciousness the patient was found to be suffering from inability to speak distinctly or intelligibly or to walk or use his arms. At present there is no impairment of the general functions or of sensation. His speech is slow and deliberate, the words being slurred to a certain extent. There is incoördination to a slight amount in both upper and lower limbs, and he is unable to maintain his balance without some slight support. There is no loss of memory or brain power.—Major W. S. Harrison, R.A.M.C., commenting on the case, remarked on its resemblance to one of disseminated sclerosis, from which, however, it differed in the steady improvement that it showed. He pointed out that the man was not conscious of any impedient to his speech, a symptom that was present even when the speech was quite unintelligible.—Captain Cumming then showed a case of Splenic Anæmia. The patient had been invalided on account of enteric fever in 1902, and the enlargement of his spleen dates from that period. Towards the end of that year he had an attack of hæmatemesis and syncope, the spleen being much enlarged. Similar attacks occurred in 1903, and again after a long period of freedom in 1907, and at the beginning of last year. At present the spleen is enlarged to within one inch of the umbilicus and is tender in the axillary line. The red cells are reduced to 3,000,000 and the hæmoglobin 50 per cent. His last severe attack of hæmatemesis was in April last, since when there has been decided improvement.—Major Harrison pointed to the non-tropical origin of the case, which was a characteristic example of Banti's disease. Malaria and kala-azar were excluded by the absence of parasites, and there was in addition none of the leukopenia so marked as a rule in the latter disease.—Captain J. C. Kennedy, R.A.M.C., described a case of Phagedænic Ulcer of the Larynx. The symptoms were not well marked as regards the larynx till within a few days of death. The previous history was one of high fever and enlargement of the liver and spleen. No parasites were present in the smears made from a liver puncture. The post-mortem examination showed erosion of the tip and edges of the epiglottis, with sloughing in the region of the left vocal cord. A large bacillus was found invading the tissues at the base of the ulcers, possibly the cause of the disease. It was found impossible to subculture this organism. Resemblances were pointed out between this case and the ulcerous rhinopharyngitis of Leys, as well as the sloughing phagedæna of the tropics mentioned by Manson.—Major C. G. Spencer, R.A.M.C., showed a case of Fracture of the Cervical Vertebræ, unrecognised at the time of occurrence, and only revealed by a subsequent X ray photograph 10 days after the accident. There was then some rigidity in the cervical region, but no tenderness or deformity. At present there is still some rigidity of the neck, and an area of impaired sensation on the posterior surface of the lower third of the forearm.—A discussion followed, in which Fleet-Surgeon V. G. Thorpe, R.N., and Lieutenant-Colonel R. W. Wright, R.A.M.C., took part, chiefly as to the advisability of early operation in serious cases of spinal fracture. Skiagrams of the case were shown.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Nov. 26th, Mr. C. Gordon Watson, the President, being in the chair.—Dr. B. G. Morison related the following three cases of Melæna Neonatorum:—1. On the morning of the fourteenth day after the birth of a healthy child the diaper was found to be "full of blood," and almost immediately after the child died. The post-mortem examination showed that the gall-bladder contained some blood-clot as well as dark bile. The stomach contained bloody mucous fluid. The small intestine was entirely filled from end to end with dark bloody fluid, which escaped on puncture. The suprarenals were not distended and looked pale, but on opening them a little dark blood was found in both. Microscopically they showed extreme congestion of the medulla but no actual extravasation of blood. The capillaries in the medulla were widely dilated and the appearance suggested some possible interference with the normal blood return from the organs. It did not suggest an acute condition, but rather one of some standing. 2. When born the child was of a dirty-brown colour, "like a penny," and the penis and scrotum were blue as if from subcutaneous hæmorrhage. There was bleeding from the cheeks; the skin was cracked in the flexures and bled easily. Brown material was vomited and black stools were passed which were occasionally mixed with a little pure blood. The child rapidly wasted and died on the twelfth day. Post mortem there was ecchymosis of the mesentery and mesenteric glands, ileum, and hepatic flexure of the colon. The suprarenals were rather larger than normal and in each there was a thin layer of dark blood in patchy arrangement. Microscopically they showed marked congestion of the medulla with blood free among the cells, infiltrating in places up to the cortex. 3. A healthy child, went on well for a week, then had hæmatemesis and passed dark "coffee-ground" motions, which continued till death on the fourteenth day. Post mortem the mucous membrane of the intestine showed venous congestion from the anus up to the stomach. The suprarenals seemed rather large, and microscopically were engorged with blood. The question arose whether melæna neonatorum was merely part of a general hyperæmia which overflowed in the alimentary tract or whether it could have exercised a causal influence in the latter occurrence.—Dr. W. Langdon Brown showed some Pathological Specimens.—Mr. J. Houston Porter read notes of a case of Pneumothorax which had been twice operated on.—Dr. D. Ross read a short paper on the Relationship of Calculus to Gout.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held on Nov. 18th, Dr. L. S. McManus, the President, being in the chair.—Dr. Victor Bonney read a paper on the Prevention and Treatment of Puerperal Sepsis.—A discussion followed.

Reviews and Notices of Books.

Naval Hygiene. By JAMES DUNCAN GATEWOOD, M.D., Instructor in Naval Hygiene, U.S.N. Medical School, Washington, Medical Inspector, U.S.N. Prepared by direction of the Bureau of Medicine and Surgery, and published by permission of the Navy Department. With eight coloured plates and 105 illustrations. London: Rebman, Limited. 1909. Pp. 477. Price 25*s.* net.

Sir John D. Macdonald's "Naval Hygiene" appeared in 1881 and Romeril's little "Sanitation in the Mercantile Marine" in 1898. No other book on this subject has recently appeared in English. It is well the lacuna should be so worthily filled as by this account of the hygiene of the United States Navy. To direct our efforts for the prevention of disease we must first know what diseases there are to be prevented, so the author first discusses the relative prevalence of the diseases which occurred in the United States Navy from 1895 to 1905. Unhappily, he rarely states the crude figures, but only ratios, so it is difficult to find out with exactly how large a mass of facts he is at any time concerned. He has evolved a very valuable method by which to express the full damage done to the service in any one year by a single disease, or by all, assembling into one number the loss of service in that group per 1000 men daily from its sickness, deaths, and invalidings all together. As the deaths and invalidings are probably distributed evenly throughout the year, and one invaliding on March 31st means 9 months lost, another on Sept. 30th 3 months lost, average for the two 6 months lost, the service loses on the average for each man dead or invalided half the work it should have got out of him. Thus the total loss of service in any one year by the deaths and invalidings is their number × 6 months = half the number × 1 year. In short, to the sick daily per 1000 add half the deaths per 1000 and half the invalids per 1000, and the sum will be the total waste in that year daily per 1000 men from whatever disease or group of diseases we are at the

moment considering. Though most valuable and a great advance, this method is not final, for invalidings are given the same weight as deaths, vastly more important though these latter are to the nation if not to the navy.

In the United States Navy the greatest loss is by venereal disease, of which it is stated that it "takes more of the strength of nations than all wars and accidents," and is "accountable for more than 25 per cent. of all the damage from disease." The importance of intoxication as a predisposing cause is noted, alcohol being "not only a sexual stimulant, but a paralyser of the inhibitory control of the will." Very successful preventive measures taken on U.S.S. *Wilmington* in China in 1906 are reported (p. 46). Tubercle is the next most frequent cause of loss of service (8 per cent.); it occurs mainly amongst recruits. For prevention he recommends: (1) the *zealous* (author's italics) search for the bacillus in sputum; and (2) the immediate removal from the ship and invariable ultimate invaliding of every case.

The second chapter, Air, is the most important in the book, as this section must be in every book on the hygiene of ships. As an example of the author's treatment of the subject we may quote (p. 195) his account of the objects of ventilation: "The continuous and more or less systematic removal of air in a closed space by a properly distributed supply of air in good condition with the object of securing dryness, making up deficiency in oxygen, and removing, or sufficiently diluting, gaseous material derived from occupants and stores, over-heated air, products of combustion and particulate bodies that may be present." The excreta of man himself are, he recognises, the primary exciting causes of diseases. The impurities to be removed are carbonic acid, moisture, smells, and dust, often microbic; for air is fouled by excreta from lungs, mouth, intestine, skin, and by particles rubbed off clothing and bedding, all the conditions on board ship being complicated by dampness off the decks. The de Chaumont standard of ventilation after due consideration is the one adopted by him in a very thoughtful piece of work.

This book is too large and its contents are too various to make it possible to follow the author throughout with criticism or appreciation. We must be content to set down some of his salient points so as to indicate the scope of his industry.

For gun-deafness Elliott's ear-plugs are recommended as more efficient than plasticine, though more apt to be mislaid. The manufacture of distilled water is very clearly described. Mere traces of chlorides are due to priming and of no hygienic importance, but much chloride means leakage of unboiled cold sea water into the distiller (or condenser) tubes, and a great risk, especially in dirty harbours. Drinking water is almost never taken on board United States ships, and as all water is distilled, filters would only be a danger. 7½ gallons of water are asked for per man per day and 15 are wanted in ships with laundries. The need for frequent washing of hands is stated, and it is discussed whether, though a ship is not a hotel, soap and towels might not be provided conveniently for general handwashing, since the cleaner men and ships get to be, the less serious will be the consequences of wounds in action. Trough closets, with seats for 5 per cent. of crew, are provided with constantly running sea-water. Discharges from the water-closets now often go to an automatic steam sewage discharger which blows them out of the ship. Every drain pipe should have a connexion for steam blow-through and disinfection; chemical disinfectants should not be needed. Sea-bathing should not occur in dirty harbours, nor with temperature of sea below 70° F., nor for more than 20 minutes at any one time. Reliance is placed on sulphur and formaldehyde for gaseous, perchloride of mercury for all other disinfection on ships. Sulphur is used as a culicide against yellow fever (5 pounds per 1000 cubic feet), and against plague to get rid of rats and with them their fleas. For other diseases formaldehyde is used.

There is a full and lucid account of the principles of dietetics, and mention is made of the complications that had to be met in contriving the varied and popular diet scales of the United States Navy, but the section on meat inspection is too brief to be valuable, and its plates are useless. Alcohol is stated to be a genuine food, but here of less value than sugar, which, besides, produces no subsequent depression. It is further noted that alcohol is popularly no more employed for its food value than is castor-oil; both have some slight food value, but neither is ever used except as a drug. It is pointed out that the expenses and profits of "tenant" canteens come out of the money the men spend on food, chiefly money contributed to them by the State in commutation for rations they do not desire. Hence commutation for all but the higher ranks has been abolished in the United States Navy, which, by the way, issues no ration of alcohol.

The examination and selection of recruits are minutely and usefully discussed. The United States Navy recruits men between the ages of 17 and 35 years, with varying standards, for four years, and if satisfactory and still physically fit they may re-engage within four months of discharge. In 1907–08 17,852 so entered for the first time; of those discharged 57 per cent. (4077) rejoined. The American Service uses the Holmgren test and finger-prints. The author points out that sickness-, invaliding-, and death-rates vary directly and materially with the number of recruits received, and that the morbidity of two navies can hardly be usefully compared unless the proportion of recruits involved is in each case stated. We would add that to make such comparisons of value, or comparisons with the health conditions of the male populations of their own country, it is essential that the incidence of diseases should be classified in age groups and the numbers at each age stated, but that is rarely or never done nowadays.

The book is well illustrated, yet wants more diagrams. In preparing a new edition the table of contents should be paged and its headings be printed throughout the book in bold type; 150 pages is too long for the unbroken featureless flow of a chapter. Some misprints are to be corrected. On p. 405, π is not 3·4116. It must be tuneful sometimes on an American ship of war if (p. 468) the potatoes are "pealing." But when we read (p. 154) that "wind taughtens the anchor chains" we gather this is not a misprint, but a different usage, and recall the old yachtsman's puzzle, "If all the ropes in a ship are 'taught,' who teaches them?" To sum up, this is a good book, full of facts hitherto unstated or unattainable, and even if at times a little prolix, welcome for its sound and original opinions. It should be in the hands of all naval medical officers and ship surgeons, though its weight—4 pounds—will sometimes bring it to harm in the study hours of an afternoon. We congratulate Dr. Gatewood on his excellent achievement in a too poorly occupied field, and the United States Navy Department and Medical Bureau on their wise encouragement which made it possible thus clearly to state the influences which secure the health of those valuable and costly men, their sailors.

A Text-book of Practical Therapeutics. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia. Thirteenth edition. With 122 engravings and 4 coloured plates. London: Henry Kimpton. 1909. Pp. 958. Price 21*s.*

THIS is an expensive book which has appeared in an English edition 13 times, twice in Chinese, and once in Korean. Although this is not the first time we have reviewed it, its value and its emendations warrant another

full notice. The work is not a handbook of therapeutics on the usual lines; it does not give arranged tables and lists of drugs in such a manner that the composition, manufacture, chemical relations, and uses of any article can be found at once. On the other hand, it is not a theoretical work on the physiological action of drugs. Half the volume is devoted to a survey of drugs treated alphabetically. This is not an ideal arrangement, as it destroys the view of the proper chemical relations of the substances under consideration; but it has the advantage of ready reference. It is clear from the adoption of this arrangement and from other points of evidence that Professor Hare intends this work to be useful to those with limited chemical and medical knowledge, who are yet obliged by circumstances to undertake the rôles of physician or surgeon, that is, missionaries, deaconesses, nurses, or apothecaries. To such persons, who would probably also be forced to content themselves with a limited library, this compendium will be very useful. It will be not only useful for everyday references, but forms a broad, balanced, scholarly encyclopædia of medicine written by one who knows his subjects (not subject) and the needs of those for whom he writes.

The next section of the book comprises a hundred pages on remedial measures other than drugs. This section is on the whole very well done, but it attempts too much. Spinal anæsthesia is not a safe procedure to adopt when the operator is dependent upon the instructions of a book and the aid of a picture, even if the picture is a beautiful half-page illustration of a gentleman sitting on a stool undergoing the administration. Less risk will be incurred by the student who attempts to apply leeches in accordance with the very bad wash drawing on p. 560. The illustration is quite worthless; no one could apply a leech from looking at it, unless he knew how to apply a leech previously; and no reasonable guide is afforded by the picture as to the proper field of the industries of the leech. Some warning might have been given as to the difficulties of ascertaining which is the "head end" of the leech, and so save the student from the pitfall so graphically described by H. S. Leigh—

> "Perchance, reluctant being, I have placed thee wrong side up,
> And the lips I have been chiding are the furthest from the cup."

Is it any use to try to instruct readers as to the proper method of administering a course of "Weir-Mitchell" rest cure in two pages? Anyone who had to depend upon two pages of a book for their knowledge of a procedure fraught with so many difficult points and responsibilities had better leave it alone for his own credit and the patient's weal. It is not safe advice to say, "Be the symptoms what they may, as long as they are dependent upon nerve strain, this 'cure' is to be resorted to, and if properly carried out is often attended with surprising results." If such an important procedure is undertaken in this airy fashion the results will occasionally be surprisingly disappointing to both patient and adviser. But there is no more difficult task in the compilation of books on modern therapeutics than the just estimation of the value of modern methods. In his selection of these methods Professor Hare has shown great judgment.

We would suggest that Professor Hare in a subsequent edition should revise the chapter on feeding the sick. There is no use in the elaborate tables of nutrient values which range from beef or codfish "as purchased" to "beef or codfish" as edible portions, with equivalent statistical estimations of "bluefish" and "shad," "oysters in shell," "cow's milk," "oleomargarine" or "lemons," and a little more attention might have been paid to the recipes for cooking. One recipe for "mulled wine" says: "Boil some spices—cloves, nutmeg, cinnamon, or mace—in a little water, and add as much of this decoction as is necessary to flavour a wineglassful of sherry or any other wine. If claret is used it will require more sugar than if a less sour wine is employed." We trust we may not encounter "mulled wine" prepared by the inexpert from this recipe. And the author gives us the amount of fats, carbohydrates, and mineral matters in a "red Rhine wine" (which can hardly be procured in England, and still less, we should say, in America).

300 pages are devoted to "Treatment of Disease." This is also arranged alphabetically, and in consequence many of the "diseases" are merely symptoms. This part is carefully written, sound in selection, and not too condensed in style. Many of the illustrations are of moderate value; the coloured plates are of fine quality, but the cost of their production is not justified by their practical worth.

Medical Inspection of Schools. By A. H. HOGARTH, M.B., B.Ch. Oxon., D.P.H., Assistant Medical Officer (Education), London County Council. London: Henry Frowde and Hodder and Stoughton. 1909. Pp. 360, including appendices and index. Price 6*s.* net.

IN this interesting and valuable volume the author gives an exposition of the medical inspection of school children and an account of the methods which are, or which he thinks should be, adopted. The insight gained in his work for the London County Council enables him to describe and to comment on the work in other places, both in this country and abroad, in a useful manner. But, as might be expected from the well-known views of the author, a large part of the book is given over to a discussion of the question whether school medical officers should be independent officers, or whether they should be (or work in conjunction with) officers of the public health service—a question of subsidiary importance from the point of view of many likely to be attracted to the volume by its title. Dr. Hogarth is so strongly persuaded that the school medical officer should be independent, that in perusing the earlier chapters we cannot avoid the impression that both sides of a difficult question are not receiving adequate treatment. On p. 97 there is a table which must have taken considerable trouble to prepare. It gives a list of subjects in relationship with the public health ranging from quarantine to elementary school teachers' superannuation, and of value from many points of view, but in a work purporting by its title to deal with the medical inspection of schools the introductory sentence, which states that the table "illustrates the present condition of medley and chaos," does not do justice either to the performances or the expectations of those who regard school inspection as a legitimate development of the public health service. The sentence immediately succeeding is as follows: "In this incongruous and uncompromising medley school hygiene has to take its place as the newest branch of State medicine." We would suggest that Dr. Hogarth when revising his work for subsequent editions should very materially modify Chapter VIII., rendering it more instructive and less controversial. "The organisation of a central department of State Medicine" is not essentially a subject to be dealt with in a volume the title of which indicates that it has to do with the medical inspection of schools.

The chapter on administrative routine, though not improved by the effort which is constant through the book to maintain the position that school medical officers should be independent, is of great interest. It contains details of inspection, of registration, of the action taken in connexion with infectious diseases, of special schools, medical certification, annual and other reports, and so forth. The chapter on treatment embodies much valuable matter and would be improved by amplification, and space could easily have been found if topics less germane to the central subject had been

more briefly treated. School clinics and the difficulties connected with their establishment are dealt with in Chapter XV., and the case for their establishment is well stated, as also is the description of the necessary building and furnishing. The cost set forth on pp. 252 and 253 seems heavy and is likely to deter the more parsimoniously-minded authorities from putting their ratepayers to expense in the matter, but there is not yet sufficient evidence to show exactly what the absolutely necessary amount of expenditure in any given locality should be.

We shall not follow Dr. Hogarth into the more controversial part of his book, but he certainly gives those who desire to do so considerable opportunity. On p. 117, advocating the appointment of medical practitioners as school medical officers, he points out that "a local doctor has a great opportunity of getting into touch with teachers and parents," as it should be part of his duty to "give lectures to the teachers, and arrange conferences at the school for the parents." In this regard Dr. Hogarth attaches little importance to the fact that local practitioners appointed to schools in this manner have an advantage over their fellow practitioners in gaining the good opinion of the people in the locality, and it is probable that at times this advantage might operate unfairly. The question is by which section of the medical profession can the public be best served in the matter of medical inspection of school children, and where should the emoluments of the service be directed. The conditions of urban and rural practice are different, the interests of all members of the medical profession are not identical, and in the consideration of these difficult matters Dr. Hogarth takes a very decided line. We cordially approve of the open way in which he gives views to which he has a perfect right, but it would have been well had he gone more fully into the other side of the question; no general law can, we think, at present be laid down for all the county areas, and good work is being done under both systems.

There is a vast amount of useful information contained in this book and Dr. Hogarth is to be congratulated upon his performance. But those who are looking for a guide to their labours as medical school inspectors ought to know that in his work they will find a good deal of matter which will be of no service to them in their routine, though it may supply them with food for considerable thought upon the whole educational question in connexion with personal hygiene. The book is one which should be read in a critical spirit, as it is important that the reader for some time to come should retain an open mind upon several of the questions upon which Dr. Hogarth makes very decided, and sometimes premature, pronouncements.

The Law Relating to Poisons and Pharmacy. By W. S. GLYN-JONES, Barrister-at-Law. London: Butterworth and Co. Price 10*s.* 6*d.* net. 1909. Pp. xxxvi. + 410.

THE restrictions with which the legislature has from time to time bound the sale of poisons deserve study by all publicists, whilst the laws which govern the practice of pharmacy, which is an integral part of the art of medicine, should be understood by all medical practitioners. We have, therefore, read Mr. Glyn-Jones's work with the greatest interest, and welcome it as a handy compendium of the statutes, charters, and leading cases dealing with the subjects included in its title.

Free trade in poisons was only abolished in 1851, when in consequence of numerous cases of poisoning the Arsenic Act was passed, restricting and controlling the sale of all colourless poisonous preparations of arsenic, or, as chemists prefer to call it now, arsenium. In the following year the first Pharmacy Act received the Royal Sanction, but this in no way restricted the practice of pharmacy or the sale of poisons, providing only for the registration and protection of the title of pharmaceutical chemist. The Pharmacy Act of 1868, however, made it an offence for any person not registered as a pharmaceutical chemist, or chemist and druggist, to sell or keep open shop for the retailing, dispensing, or compounding of certain substances scheduled by the Act as "poisons," and this provision, with some additions made to the schedule from time to time, remained in force in its entirety until April 1st last, on which date the Poisons and Pharmacy Act of 1908 came into operation. Section 2 of this Act provides for the granting by local authorities of licences to persons other than registered chemists, enabling them to sell the poisonous substances referred to in the section for use for specified purposes in connexion with agriculture and horticulture. The reason for this somewhat retrograde enactment was the inconvenience which it was alleged had been suffered by farmers and gardeners owing to the restriction of the sale of poisonous material to registered chemists and druggists in districts where there were no such qualified tradesmen within easy reach.

The Schedule of Poisons has also been recast by the 1908 Act, but is by no means free from ambiguities, and the author of this work has drawn up a list of substances which he considers are comprehended by its terms, and which should at least serve as a guide. He points out, however, that such phrases as "poisonous vegetable alkaloids" involve questions of fact which can only be determined upon the evidence of medical experts. The term "poisonous" being a relative one, the difficulty arises in arriving at the degree of toxicity necessary to bring any particular alkaloid within the schedule. Probably the alkaloids specifically named in the schedule may be taken as a guide, and the expression, "All poisonous vegetable alkaloids not specifically named in the schedule," be taken to mean alkaloids *ejusdem generis* (as to toxicity) with those specifically named.

With regard to medicines supplied by medical practitioners to their patients which contain scheduled poisons we are reminded that these are only exempt from the provisions of Section 17 of the Pharmacy Act, 1868, if such medicines be labelled distinctly and legibly with the name and address of the seller (i.e., the medical practitioner) and the ingredients thereof be entered with the name of the person to whom it is sold or delivered, in a book to be kept by the seller for that purpose. We cannot recall any case in which this section has been enforced against any medical practitioner not keeping an open shop, nor does the author quote such, but it is hardly satisfactory that it should be so habitually ignored. The book contains an interesting discussion as to the meaning of "acting as an apothecary," and enunciates rules as to when what is known as "counter-prescribing" comes within the meaning of this phrase. Although the author has a somewhat arid legal style we can commend his work to all who are interested in forensic medicine.

LIBRARY TABLE.

Three Voyages of a Naturalist. By M. J. NICOLL. Second edition. Illustrated. London: Witherby and Co. 1909. Pp. 246. Price 7*s.* 6*d.* net.—The demand for a second edition of this excellent book of travels within 18 months of its first publication proves that a large number of readers appreciate a well-written account of foreign parts. Mr. M. J. Nicoll was chosen by the Earl of Crawford to accompany him as naturalist on three of the trips in his steam-yacht *Valhalla*. Lord Crawford states modestly in his introductory note that he took Mr. Nicoll with him that "he might bring back something for the Natural History Department of the British Museum." The choice was amply justified, and as

the results of Mr. Nicoll's work 500 skins of birds were brought home, of which no less than eight were specimens new to science. The whole book is fresh and delightful to the general reader, and to none more than to those whose lot confines them to cities in the dark, short, and bad days of winter. For it is glorious to read of sunshine and mountains and palm trees, and barrier reefs covered with water so clear that everything is seen as in a glass tank. To the medical reader the book appeals especially in the account of Easter Island and its present and past inhabitants. Cases of elephantiasis were seen in Tutuila Island, one of the Samoan group, where the natives believe that the disease arises from the bites of mosquitoes and say that nearly 25 per cent. of the inhabitants are affected. The stegomyia fasciata was found on Pitcairn Island and also in the Society Islands, but, fortunately, these mosquitoes do not seem to be infected yet with the yellow fever parasite. The three voyages were, one round Africa in the winter of 1902–03; a second to the West Indies in the succeeding winter, visiting the Great and Little Cayman Islands; the third, a voyage round the world in 1905–06. The book is illustrated with 56 plates, four sketch maps, and many text illustrations. It is also provided with a good index.

Air and Health. By RONALD CAMPBELL MACFIE, M.A., M.B., C.M. London: Methuen and Co. Pp. 345. Price 7*s.* 6*d.*—This unnecessarily bulky volume gives an account of the properties of the atmosphere as they affect health. It is one of a series of books entitled the "New Library of Medicine," which is presumably issued to instruct a non-medical public in various aspects of public health, or in certain conditions of health as they may be controlled or influenced by the State. The volume before us is a plea for fresh air, with which no one can quarrel. There are many besides the members of the medical profession who have to preach the value of fresh air. Some of them have no accurate knowledge of physics or physiology, and have neither the time nor the necessary books to formulate for instructional purposes the slight general impressions which they may have. Such persons are clergymen, schoolmasters and schoolmistresses, nurses, health visitors, mill-owners, superintendents of mines and of indoor labour generally: to these Dr. Macfie's book will prove very useful despite its shortcomings, which no doubt have their origin in the intended scope of his work. The author has had assigned to him the difficult task of translating scientific pronouncements into a language understanded of the people. There are few writers who have this gift, even if they have a sound knowledge of the scientific facts upon which their subject is based. The general information in this volume on the chemistry of air, the physiology of respiration, temperature, and humidity, takes the form of compilations, on the whole not well expressed; they might with advantage be considerably compressed. Some of the problems considered are of a highly complicated nature, such as that of relative humidity, and it is doubtful if a reader of small scientific knowledge would carry away much information from the chapter headed "Humidity and Thermolysis." The latter word is never defined, and is introduced in an entirely haphazard way on page 87. The ignorant beginner would learn far more from a few pages of a well-written, small text-book, such as Balfour Stewart's volume on "Elementary Physics." If Dr. Macfie fails in the arrangement and matter of his introductory chapters it is because, perhaps, he has not been accustomed to elementary teaching on these subjects. When he comes to the practical application of scientific knowledge to ventilation and the evils of foul air he expresses himself well, and avails himself in an interesting manner of the detailed labours of others. The chapters on impure air, trade emanations, dust, and ventilation are excellent and readable. The remarks on fresh air and the abolition of "colds" are very sound and wholesome. Dr. Macfie's personal experience as superintendent of a large sanatorium for tuberculosis renders his pages on open-air treatment a valuable closing chapter. He gives a picture of the difficulties and opposition which the early pioneers—Bodington (1840) and Henry MacCormac (1855)—encountered, in spite of the courage with which they advocated in vain a system which is now adopted over the whole world. More credit might be given to these two Englishmen, who were really the original priests of the cult of the open window.

Food and Health. By ARTHUR E. POWELL, Lieutenant, Royal Engineers. London: Methuen and Co. 1909. Pp. 266. Price 3*s.* 6*d.*—This is an *ex-parte* exposition of the usual stock arguments in favour of vegetarianism. There is a chapter in which it is sought to condense the teaching of Dr. Haig and others on the degradation products of nitrogenous katabolism. Another chapter consists of "snippets" from all sorts of authors, selected presumably because they support the practice of vegetable feeding. These include such high authorities as "Lieutenant Low in the *Food Journal*, 1873" (*sic*), the *Panama Star and Herald*, and Oliver Goldsmith. The last respectable essayist as an authority on the food of the ancient Britons is funny. In the same chapter is a quotation from Miss Anna Kingsford to the effect that "even the rich people in this province take meat only on fête days." Those who know Brittany, the province mentioned, will know this to be quite incorrect. Lieutenant Powell spoils his own cause, a cause with which we have no quarrel, by attempting to support it by disquisitions on the ethics of killing animals. Then he drags in a chapter on so-called Christian Science and its congeners. Meat, alcohol, tobacco, tea, coffee, and all drugs come under the same ban, and leave the reader wondering at the gallantry of the lieutenant in making so many attacks on such slender equipment.

A History of the Oxford Museum. By H. M. VERNON, D.M. Oxon., and K. D. VERNON. Oxford: At the Clarendon Press. 1909. Price 1*s.* 6*d.* net. Pp. 127.—The authors of this little book tell us that its beginnings arose out of the Jubilee celebration of the museum held in the Sheldonian Theatre last year. Nearly all valuable work which has been accomplished in this world derives its value in great part from the struggles and trials which have accompanied its inception and progress, and the Oxford Museum is no exception to this rule. Dr. Vernon and his collaborator trace the study of scientific subjects in Oxford from the modest beginnings of that which is now the Royal Society in 1645 to the present day. From that date until the foundation of the museum in 1855 science, to quote the eloquent words of the Vice-Chancellor at the Jubilee celebration, was in the condition of the cave-dwellers among primitive man. "Her teachers, like those of the early Church, wandered about in 'caves and dens of the earth.'" But the work went steadily forward until "the cockatrice's den," as one worthy don of the old school called the museum, has grown into the present fairly well equipped building. We say fairly well, for there is still plenty of room for more apparatus. It is easy to be wise after the event, but if the fabric of the museum were now in course of erection there is no doubt that the Gothic style would not be the one chosen. We have always thought it a pity that Ruskin and Woodward, thorough artist as the latter was, did not choose a design taken from Tudor or Jacobean architecture. This style with its enormous windows would have given every opportunity for one great desideratum of a museum or laboratory—namely, light, although in the laboratories the characteristic ornamented ceilings would have required modification to avoid the

collection of dust. But as the Gothic style was adopted nothing could have been carried out with more of the feelings of the mediæval craftsman than the decorations by Woodward and O'Shea despite the heavy handicap under which they laboured owing to the vagaries of the Delegates' Council, Convocation, and the contractors. All these difficulties and the way in which they were overcome, more or less, are set forth in Dr. Vernon's interesting little book, a book which we counsel those interested in the progress of science at Oxford to read.

Laboratory Notes on Industrial Water Analysis. By HELEN H. RICHARDS. First edition. New York: John Wiley and Son. London: Chapman and Hall. Pp. 48. Price 2*s.*—This is a capital manual written for the use of the engineer. The directions are quite sensible, and are embodied in a well-planned series of laboratory exercises. These exercises relate to such practical considerations as the hardness of water, the tendency to form scale, the presence of iron, alkalies, of oxygen dissolved, of any action upon metals, and so forth. The book concludes with a number of tables giving useful data. The author is careful to point out that in a number of cases the questions at issue can only be dealt with by the expert chemist. There remain, however, certain simple cases which the engineer with the clear instruction set before him in this book should be able to decide for himself.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

PYOCYANASE.
(ODOL CHEMICAL WORKS, 59, AND 63, PARK-STREET, LONDON, S.E.)

Pyocyanase was referred to in an interesting paper by Dr. Eug. Piasecki on "The Bacteriological Investigations on Some Modern Mouth Disinfectants," published in THE LANCET of Nov. 6th, 1909. Pyocyanase is prepared according to the method of Emmerich and Loew from several weeks old cultures in fluid media of the pyocyaneus organism under special conditions. The liquid is carefully sterilised and keeps for a remarkable time; it is self-preserving. Pyocyanase, in fact, represents the enzymes derived from the bacillus pyocyaneus, and amongst these ferments is a germicide not only fatal to the bacterium itself, but to many other species. This fact suggested the use of the sterilised culture in internal disinfection. Its germicidal action is certainly remarkable, judging from the bacteriological experiments made with it. Pyocyanase has been employed in a number of diseases, as, for example, diphtheria, scarlet fever, nasal catarrh, diseases of the mouth, and so on. According to Dr. Piasecki, pyocyanase when applied in spray in small repeated doses develops a higher bactericidal action than any other mouth disinfectant which has hitherto been recommended after exact investigation.

ANTI-DIPHTHERIC DRAGÉES.
(THE ANGLO-AMERICAN PHARMACEUTICAL CO., 59, DINGWALL-ROAD, CROYDON.)

These dragées are prepared by the Pasteur Vaccine Co. at the bacteriological institute at Lyons. They present the appearance of a sweetmeat and are allowed to slowly dissolve in the mouth. Each contains, it is stated, 0·25 centigramme of anti-diphtheric serum rich in antitoxic units. The medium is a special preparation which serves to preserve the serum until such time as the dragées are taken. They are intended for use as a preventive of diphtheria and as a guard against throat troubles.

(1) MASSOLETTES; AND (2) LACTATED IRON TABLETS.
(ARTHUR H. COX AND CO., LIMITED, BRIGHTON.)

1. The massolette is a very ingeniously prepared chocolate-coloured sweetmeat, containing the bacillus of Massol in its highest state of activity. We have carefully examined the preparation in regard to this statement and find that it is true. A single massolette placed in half a pint of milk kept at 100° F. soon developed lactic acid. These bon-bons are designed for what is sometimes called the health milk treatment. 2. The lactated iron tablets undoubtedly afford a satisfactory way of administering iron. The iron occurs along with the lactic acid bacillus.

ANTILEPROL.
(THE BAYER CO., LIMITED, 19, ST. DUNSTAN'S HILL, LONDON, E.C.)

Antileprol is described as a specially purified form of chaulmoogra oil, which the Bayer Co. has introduced at the request of Dr. Engel Bey of Cairo, who states that it has the same curative properties as the original chaulmoogra oil (oleum gynocardiæ), but is much superior to the other, since it enables prolonged treatment to be carried out in most cases without unpleasant complications. The oil is also recommended for tuberculous cases. The sample which we examined was of a light yellowish colour and was contained in capsules of half and one gramme for purposes of administration.

"PACO" DIASTASE MALT EXTRACT.
(PAINE AND CO., LIMITED, ST. NEOTS, HUNTINGDONSHIRE.)

Two specimens of malt extract were submitted to us and both showed a high degree of digestive activity; sample No. 1 proved to digest 10 times its weight of starch at body temperature, and sample 2 as much as 20 times its weight. It is probable that these figures would be doubled under conditions of higher temperature. Apart from their high diastatic activity, the specimens were agreeable to the taste and contained a commendable portion of malt extractives, including proteins, malt sugar, and phosphates. The process of manufacture is evidently carried out with care, preserving as far as possible the initial activity of the diastase in the malt.

TURTLE CUP.
(TURTLE CUP, LIMITED, 15, BURY-STREET, ST. MARY AXE, LONDON, E.C.)

"Turtle cup" affords a convenient and ready way of preparing turtle soup. It consists of a square gelatine tablet which quickly dissolves in hot water. The resulting bouillon is pleasant to the taste and the analysis of it showed the presence of nutritious elements setting aside the question of the value of gelatin. The mineral matter amounted to 10·50 per cent., the moisture to 25·90 per cent., and the total nitrogen to 7·48 per cent. Flavouring materials have evidently been added, but in quantities which do not disguise the much esteemed turtle flavour. "Turtle cup" introduces a very palatable and nutritious soup for domestic use, and it is an advantage to be able to prepare it as required.

USHER WHISKIES.
(FRANK BAILEY AND CO., 59, MARK-LANE, LONDON, E.C.)

The whiskies examined were of a mild type owing to judicious blending. The flavour was delicate and indicated a blend of malt with grain spirit. The estimation of the secondary products endorsed this view. The sample marked "Liqueur" gave on analysis the following results: alcohol by volume, 48·21 per cent.; extractives, 0·14 per cent.; volatile acidity reckoned as acetic acid, 0·024 per cent.; and fixed acidity reckoned as tartaric acid, 0·022 per cent. The furfural amounted to 1 part per 100,000 parts. The sample marked "Special Reserve" gave the following results: alcohol by volume, 47·67 per cent.; extractives 0·15 per cent.; volatile acidity reckoned as acetic acid, 0·02 per cent.; and fixed acidity reckoned as tartaric acid, *nil*. The

former specimen showed greater age. Both whiskies were clean to the palate and free from coarse flavour.

BIPSINE BREAD AND BISCUITS.

(BIPSINE FOOD CO., WESTMINSTER ESTATES, LIMITED, 17, WATERLOO-PLACE, LONDON, S.W.)

It is stated in regard to Bipsine bread that its digestibility is enhanced by adding to it a small quantity of pepsine. However that may be, our analysis gave the following results: moisture, 35·70 per cent.; total protein, 5·73 per cent.; mineral matter, 1·50 per cent.; and soluble matters (cold water), 12·00 per cent. These results do not differ materially from those obtained with ordinary well-made bread. The texture of the bread was uniform and the flavour good and appetising. Further, the loaf keeps well and develops no acidity. We strongly approve the method of delivering Bipsine bread to the consumer, each loaf being wrapped in white paper with a band outside which serves as a guarantee label. Bipsine biscuits are made on similar lines and the result is satisfactory. They are well baked and crisp and possess an attractive flavour.

THE JOHN HERBERT WELLS FUND.

THE following is the fourth list of subscriptions to the John Herbert Wells Fund. Further contributions will be gratefully received by the Earl of Dalhousie and Mr. Julian G. Lousada, honorary secretaries and treasurers of the fund, at 16, Old Broad-street, E.C., or by ourselves at this office:—

	£	s.	d.
Sir Julius Wernher, Bart.	25	0	0
Miss Locock	20	0	0
*Mr. R. W. Inglis	10	10	0
*Mr. G. Metcalfe	10	10	0
*Messrs. Price Bros. ...	10	10	0
*Mr. H. Daniell	10	10	0
Mrs. Gross...	10	10	0
Mrs. Alfred C. S. Draper	10	10	0
His Excellency Max Armand Ruffer, M.D.	10	10	0
Dr. Arthur P. Luff ...	10	10	0
Dowager Countess de Casa Miranda	10	0	0
Lord Iveagh	10	0	0
Mrs. Shaen	10	0	0
Dr. H. A. Des Voeux ...	10	0	0
Sir Edward Sassoon, Bart., M.P.	7	10	0
Executors of Aaron D. Sassoon	7	10	0
Professor G. Sims Woodhead	5	5	0
Messrs. Duveen Bros. ...	5	5	0
Professor William Osler	5	5	0
Dr. Charles Slater	5	5	0
Mr. Smeeton Johnson ...	5	5	0
Messrs. Lawrence, Son, and Gardner...	5	5	0
*F. G. G.	5	0	0
Mr. S. Symons...	5	0	0
Miss Henderson	5	0	0
Mr. Allan McLean	5	0	0
Miss Jean Alexander ...	5	0	0
Lieutenant-Colonel H. Bonham	5	0	0
Mr. W. Tindall Lister ...	5	0	0
M.B.	5	0	0
Mr. Walter Morrison ...	5	0	0
Mrs. A. W. Noyes	5	0	0
Mr. John J. Mowbray ...	5	0	0
Mr. L. B. Schlesinger ...	5	0	0
Captain W. E. Goodenough	5	0	0
Mrs. Warren	5	0	0
Mrs. Lionel Beddington	5	0	0
Commander E. A. Thomas, R.N.	5	0	0
Mr. Carlton Cross	5	0	0
Mrs. M. O. Aitken	5	0	0
Mr. Arthur D. Sassoon ...	5	0	0
Mr. Alfred Herbert ...	3	3	0
Mr. S. Gissing Skelton ...	3	3	0
Anonymous	3	3	0
Mrs. James Goodenough	3	0	0
Mr. F. C. Scotter	2	2	0
Mr. Herbert D. Cohen ...	2	2	0
Messrs. Glanvill Enthoven and Co.	2	2	0
Mr. J. A. Franklin... ...	2	2	0
Mrs. N. L. Cohen	2	2	0
Mr. James H. Solomon	2	2	0
Mr. A. H. Fass...	2	2	0
Mr. C. H. St. John Hornby	2	2	0
Mr. George A. Cohen ...	2	2	0
Miss Rachel Humphreys	2	2	0
Messrs. Miller and Lascelles...	2	2	0
Mr. N. S. Lucas	2	0	0
Mr. E. Haughton James	1	1	0
Miss H. Gurney	1	1	0
Mrs. Micklem	1	1	0
Mr. D. F. Schloss	1	1	0
Mr. F. B. Debenham ...	1	1	0
Mr. Butler Aspinall, K.C.	1	1	0
Anonymous	1	1	0
Mr. A. D. Steel Maitland	1	1	0
Dr. Edward Law	1	1	0
Mr. G. M. Lazarus	1	1	0
Mr. Rowland Barran, M.P.	1	1	0
Mr. J. B. Bateman... ...	1	1	0
Mr. L. Eaton Smith ...	1	1	0
Dr. Luther Croll	1	1	0
Mrs. H. Rapier	1	1	0
A.H.M.	1	1	0
Mrs. Lichtenstadt	1	1	0
Mrs. Jane Graham... ...	1	1	0
Mr. W. H. Eagland ...	1	1	0
Mr. F. C. Hitchins... ...	1	1	0
Rev. I. Samuel	1	1	0
Mr. P. de la Penha... ...	1	1	0
Hon. Gilbert Johnstone	1	1	0
Mr. Sydney Bristowe ...	1	1	0
Mr. C. Holden...	1	1	0
Mr. C. D. Hoblyn	1	1	0
*Mr. Edwin Dawes ...	1	1	0
*Mr. O. C. Quekett ...	1	1	0
*Dr. Limington Ash ...	1	1	0
*Mr. Henry Sewill ...	1	1	0
*Mr. F. Faithfull Begg ...	1	1	0
*Mr. A. W. Smithers ...	1	1	0
*Mr. C. J. Whittington	1	1	0
*Mr. M. A. Green	1	1	0
*Mr. R. M. Newman ...	1	1	0
*Mr. C. P. Perocood ...	1	1	0
*Mr. Reginald Head ...	1	1	0
*Mr. Hunter Blair ...	1	1	0
A Friend	1	0	0
Mr. Douglas Gordon ...	1	0	0
Dr. Urban Marks	1	0	0
Anonymous	1	0	0
Dr. R. G. Kirton	1	0	0
Miss Lucy E. M. Ellis ...	1	0	0
Miss Wright	1	0	0
Mr. James Henderson ...	1	0	0

N.B.—The items marked * were included in the donation of £64 17s. from "Members of the Stock Exchange", published in the last list.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, NOV. 24TH.

THE Council resumed its sittings. Sir DONALD MACALISTER, the President, was again in the chair.

The Medical Curriculum.

The sitting was mainly occupied with the consideration of penal cases. However, an interval of time intervening between two cases was utilised for continuing the debate on Dr. J. Y. Mackay's motion expressing approval of the following recommendation of the Education Committee:—

"That the following be added to the Recommendations of the Council in regard to Professional Education.

"For the purposes of this Recommendation the subjects of the curriculum are arranged in two groups, the Earlier Group comprising the Preliminary Sciences and Anatomy and Physiology, the Later Group embracing all the remaining subjects, exclusive of Pharmacy.

"The Regulations of the Bodies should be so framed as to secure (1) for the study of the subjects of the Later Group the reservation of a period equivalent in value to 2½ academic years (27 months) of undivided study, half-time value being allowed for periods of work in which studies in the Earlier and Later Groups overlap; and (2) the reservation of a period of two academic years (21 months), in which the studies of the Later Group shall have the undivided attention of the Student."

Dr. NORMAN WALKER (resuming the debate) said that he had long been interested in medical education, but it was only in the last 18 months that he had been a member of the committee in Edinburgh which had been considering the question of the curriculum. He had learned how easy it was to criticise the medical curriculum, but how difficult it was to fit in the different parts one with another. He recognised that the earlier subjects, if properly taught, were of immense value in the medical curriculum. The Council did not count botany and zoology amongst these. All it required was an elementary course in biology. No one could deny that it was an admirable introduction to anatomy. The amount of apparatus used in practical physiology made it important that students should have more acquaintance with physics than school teaching could afford. Chemistry could be taught in such a manner as to be perfectly useless to a medical student, or it might be taught so as to be an admirable introduction to physiology and pharmacology later. All depended on how subjects were taught. The object of the motion, he understood, was to try to make it more certain that the clinical subjects should get fuller consideration. The importance of the earlier scientific training could not be exaggerated. He agreed with the remarks of Sir Thomas Fraser that it was very important that a thorough groundwork should be laid in the case of every student. That was not all. The State required that the Council should only admit to the Medical Register those persons who had a practical knowledge of medicine, surgery, and midwifery. He might take it upon himself to speak for the younger generation of Edinburgh teachers when he said that they recognised the importance of clinical teaching. In a report they had recommended that during the last three years of the curriculum the hours between ten and half past one should be spent in the wards of the hospital. Of course, in connexion with a motion such as the Council was now discussing, there were details which were matters for individual medical schools, such as classes, teachers, buildings, and domestic discipline. What the Council was concerned with was rather that the final subjects should be adequately taught. If the recommendation were passed, the licensing bodies which did not at present accede to the 21 months of undivided final study would find it easier to insist upon this in the future. He hoped that the recommendations of the Education Committee would be passed as an instalment of what required to be done in medical education.

Dr. FINLAY thought that there was a good deal of complexity introduced into the proposal of the Education Committee by the mention of "overlapping" in it. That would give rise to a great deal of confusion in the minds of the students. If the question of overlapping could be got rid of it would be a great advantage both to students and teachers. A finished medical man could not be turned out

in five years or in ten years, but a good foundation could be given him in his student years for his clinical work. He did not propose to vote against the motion.

Sir CLIFFORD ALLBUTT said that certain universities were only partially responsible for the clinical teaching of their students. He might remark at the outset that the debate so far as it had proceeded had not left a very definite impression on him. It appeared to him that the speakers had been mixing up different things. They had spoken about universities and the great professional corporations, and mixed up their standards with what was the duty of the Council. The duty of the Council was to fix an irreducible minimum of medical education with which a man should be allowed to go into practice. The Council had not to consider the complete training of students from the ideal point of view. What it had to consider was a case where a father who had not a very large income desired his son to follow him, say, in a suburban practice bringing £500 or £600 a year. It was a grave statement to make that a man could not be well educated in five years as a competent resourceful family practitioner in a modest sphere. If he could not be so educated in five years then medical teaching must be very much at fault. The first year of study had been referred to. If more was to be expected from the medical student than a certain adequate foundation of the rudiments of chemistry, biology, and physics, then too much was being asked. He thought that the rudiments of these subjects should be given in the schools. At Cambridge steps had been taken in this direction. If the student was set to work on his anatomy to begin with, along with some advanced chemistry, he could in the second year take anatomy and physiology. Then he could have three years in which pathological work would go on concurrently with medicine and surgery.

The PRESIDENT remarked that he wanted the Council to have a clear idea of what was proposed by the Education Committee. There had been a large number of speeches dealing with various stages of the curriculum, but the debate really centred on one point—what was to be done to safeguard the second part of the curriculum. The proposal was that the Council should represent to the licensing bodies that their regulations should be so framed that the study of the final subjects, including such subjects as pathology, medicine, and surgery, should extend over two and a half years, and in any case that the instruction in them should extend over two years after anatomy and physiology had been completed. If the Council for the first time made that announcement, it would have taken a definite step in indicating to the licensing bodies the importance which it attached to the final subjects. Sir Clifford Allbutt had pointed out the fact that the Council was not legislating for an ideal curriculum which would extend over seven or eight years, but for a minimum curriculum by which a guarantee was given to the public that a medical man was a safe practitioner. Members of the Council need only take into account what in the minimum curriculum of five years should be the minimum of time and study devoted to the practical subjects. If they passed the recommendations of the Education Committee they would still allow the various bodies to adjust the time for the preliminary sciences as they might see fit. This would allow them to make the experiments which the University of Cambridge was doing in respect to these subjects. He did not think that it was desirable that there should be absolute uniformity as to that. However, he thought that the Council should at least say that in every case the last two and a half years of the medical curriculum should be occupied with the final subjects and two clear years should be given to nothing else. If the Council took that line it would be making a definite advance. He could not help thinking that overlapping was a difficulty, and that it was in the interests of the medical bodies that the recommendations of the Council should be framed in as simple terms as possible.

Dr. J. Y. MACKAY remarked that he proposed to substitute a motion in which the word "overlapping" did not occur.

The debate was again adjourned.

Penal Cases.

The Council considered penal cases for the greater part of the sitting.

The first was the consideration (adjourned from May 28th, 1909) of the facts proved against Mr. William John Watson.

The Dental Committee submitted a report in which it was stated that—

William John Watson has since the date of the last hearing of this case observed his undertaking to discontinue all advertising and to have no connexion with unqualified practitioners and no objection has been taken to the mode in which his profession has been carried on. The said William John Watson further undertakes not to advertise in future or to have any connexions direct or indirect with unqualified practitioners.

After deliberation in private,

The PRESIDENT said: I have now to say that the Council does not see fit to erase from the Dentists Register the name of William John Watson.

The next business was the consideration (adjourned from May 28th, 1909) of the facts proved against Charles Morgan in regard to whom the Dental Committee, at its meeting on Monday, Nov. 22nd, 1909, drew up a supplementary report. In that report it is stated that—

The committee find upon the evidence that Charles Morgan has since the date of the last hearing of this case observed his undertaking to discontinue all advertising and he further undertakes not to advertise in future.

The PRESIDENT, in delivering the decision of the Council, said: I have to announce that the Council does not see fit to direct the Registrar to erase from the Dentists Register the name of Charles Morgan.

The Council then took up the consideration (adjourned from May 28th, 1909) of the facts proved in the case of Thomas Torrens McKendry, registered as of 39, Wellwood-road, Goodmayes, Ilford, Essex, M.B., Bac. Surg., 1894, R. Univ. Irel., who had been summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That you have knowingly and wilfully on various occasions, and in particular on the 20th day of February, 1909, assisted one E. C. Dalby, a person not registered as a dentist, in carrying on practice as a dentist by administering anæsthetics on his behalf to persons coming to him for treatment, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainant was Dr. Victor Albert Chatelain.

At the close of the proceedings on Wednesday, May 28th, 1909, the PRESIDENT, addressing Dr. McKendry, said: "Mr. McKendry: The Council has postponed judgment till the November session, when you will be required to attend in person and to produce evidence, more particularly from medical colleagues in your neighbourhood, as to your professional good conduct generally in the interval, and in particular that you have not repeated the offence of which complaint has been made."

Dr. MCKENDRY again attended.

Dr CHATELAIN, the complainant, was not present, but a letter was read from him in which he stated that he had no further evidence to produce against Dr. McKendry.

Dr. MCKENDRY gave evidence on his own behalf. He put in three testimonials as to character from medical practitioners—viz., from Mr. A. J. Pattison and Mr. H. W. Garden of Goodmayes, and Dr. T. R. Atkinson of Chadwell Heath. He gave an undertaking not to administer anæsthetics for unregistered persons in future.

After deliberation *in camerâ*,

The PRESIDENT said: Mr. McKendry, the Council have taken note of the evidence you have produced and of your undertaking, and they have come to the decision that they do not see fit to direct the Registrar to erase you name from the Medical Register.

The Council then considered the case of Robert Wiseman Cunningham, registered as of King's Island, Tasmania, M.B., Mast. Surg. 1895, M.D. 1904, Univ. Edin., who was summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That you abused your position as a medical man by committing adultery and eloping with Alice Mary Wigram, whose husband you had been attending professionally and while you were the medical attendant of the family, of which adultery you were found guilty by the decree of the Probate, Divorce, and Admiralty Division (Divorce) of the High Court of Justice, dated June 11, 1909, in the case of Wigram *v.* Wigram and Cunningham, in which you were the co-respondent, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

Dr. Cunningham did not attend, nor was he represented. A letter was read from him in which he dealt with the matters referred to in the charge.

The Council briefly deliberated on the case *in camerâ*.

The PRESIDENT said: I have to announce that the Council have judged Robert Wiseman Cunningham to have been

guilty of infamous conduct in a professional respect and have directed the Registrar to erase from the Medical Register the name of Robert Wiseman Cunningham.

The Council then considered the case of Alexander Riddle Stower, registered as of 80, Shaftesbury-avenue, London, W., "in practice before July 22, 1878."

The Dental Committee in their report on this case stated that the complainants were the British Dental Association. The committee further found that—

The said Alexander Riddle Stower was registered in the Dentists Register on July 19, 1879, as "in practice before July 22, 1878," and his address in the Register for the current year is 80, Shaftesbury-avenue, London, W.

The said Alexander Riddle Stower has advertised his professional practice: (*a*) By advertisements carried by two sandwich men parading Oxford-street; (*b*) by the issue and circulation of leaflets and a calendar adorned with a female portrait; and (*c*) by advertisements in the public newspapers describing himself as "Stower's Dental Association," and asking for agents; (*d*) by various conspicuous notices on the front of 80, Shaftesbury-avenue, where he carries on his profession, consisting of notices in six windows, a swinging sign at the entrance, a show-case illuminated with electric lights, and other notices both outside and inside the premises. These advertisements and leaflets are of a highly objectionable character. The said Alexander Riddle Stower stated that some of the advertisements complained of had been withdrawn, and that it was not his intention to employ sandwich men or to advertise in the newspapers in future.

Mr. Stower, who attended personally before the Council, was represented by Mr. E. H. Cannot. The British Dental Association was represented by Mr. Hart.

Mr. CANNOT addressed the Council on behalf of Mr. Stower, who, said counsel, regretted very much that he had by advertising overstepped the bounds of professional propriety. With regard to the advertisements by sandwich-board and in the newspapers, Mr. Stower felt that those were improper, and he discontinued them before complaints were made, and he would not again put them into use. With reference to the notices in front of his premises, Mr. Stower desired to have the kind consideration of the Council. He practised in a neighbourhood where he appealed to a particular class of patients and where there were a great many unregistered persons who in carrying on their profession made great displays of notices. If he were prevented from making the same display to let the people in the neighbourhood know he was carrying on the profession of dentist he would be crushed out of existence. He thought that matter was worthy the consideration of the Council.

Mr. HART, on behalf of the British Dental Association, said the Council had received only a limited assurance that a cessation of the advertisements which the committee found objectionable would take place. No assurance had been given that the issue of the leaflets and calendars—to take two marked instances—would cease. He did not think that professional etiquette was in a state of flux and varied with the neighbourhood in which a practitioner found himself. It was not open to Mr. Stower to come to the Council to ask for a hall-mark for the advertisements on his premises on the ground that he claimed to compete with unregistered men on the same lines that they adopted.

The Council then deliberated in private.

When the public were readmitted the PRESIDENT said: Alexander Riddle Stower, I have to inform you that on the facts proved in the report of the Dental Committee it has been held that you have been guilty of infamous or disgraceful conduct in a professional respect and that the Registrar has been directed to erase from the Dentists Register the name of Alexander Riddle Stower.

The Council then adjourned.

THURSDAY, NOV. 25TH.

The Council resumed its sittings. Sir DONALD MACALISTER, the President, again occupied the chair.

Penal Cases.

The Council continued the hearing of penal cases.

The first considered was that of Frederick Morrish Pierce, registered as Mem. R. Coll. Surg. Eng. 1867, Lic. Soc. Apoth. Lond. 1867, Lic. R. Coll. Phys. Lond. 1868, M.D. Q. Univ. Irel. 1868, now of 50, Gordon-square, W.C., who was summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That, being a certifying surgeon appointed by the Secretary of State under the Factory and Workshop Act, 1901, you, for the purpose of evading the conditions under which you were appointed, which required the personal fulfilment of the duties prescribed by the Act (except under the circumstances and on the conditions laid down in the instructions issued by the Secretary of State), knowingly and wilfully employed another registered medical practitioner (viz., Edward Arthur Burgess) to perform your duties; and that in order to carry out this system of evasion you committed the following offences, viz.:—

"(*a*) It being your duty as such certifying surgeon to examine young persons under 16 and children for certificates of fitness for employment in factories and workshops, and to grant certificates in suitable cases, you allowed the said Edward Arthur Burgess to conduct the examination for you and to sign your name to certificates that you had personally examined certain persons on certain dates named, and that they were fit to perform the work on which they were engaged.

"(*b*) It being your duty as such certifying surgeon to investigate and report upon certain accidents, you allowed the said Edward Arthur Burgess to visit the works and the injured persons for you, and you thereafter signed certificates that you had personally investigated the causes of such accidents and had personally taken the evidence of such injured persons when in fact you had made no such personal investigation and had not personally taken such evidence, but the certificates were subsequently filled up by you upon information furnished to you by the said Edward Arthur Burgess.

"(*c*) It being your duty as such certifying surgeon personally to examine and certify persons employed in certain dangerous processes, you allowed the said Edward Arthur Burgess to examine such persons on your behalf and to insert the necessary particulars in the Health Register, which you afterwards signed: and in other cases you signed the said Register in advance, the necessary particulars being afterwards filled in by the said Edward Arthur Burgess when he visited on your behalf.

"And that in relation thereto you have been guilty of infamous conduct in a professional respect."

The original information on which this charge was based was laid before the Council by the Home Office.

Dr. Pierce was unable to attend personally owing to illness, but he was represented by Mr. Griffithes, solicitor.

Mr. WINTERBOTHAM, the Council's solicitor, said it was not a mere question here of a breach of regulations. The charge was a systematic conspiracy on the part of Dr. Pierce to mislead the factory inspector by doing what he knew was not permitted. It was a serious matter for the public, for whose protection these medical men were appointed. Dr. Pierce had charge of a district in Manchester. There was one factory in the district where dangerous trades were carried on. There was a health register which had to be signed by the medical man on the occasion of each of his visits. But in this register the number of Dr. Pierce's signatures did not correspond with the number of visits, and it was perfectly obvious they had been signed in advance because there were fewer visits than signatures. When Mr. Burgess was the duly appointed deputy of Dr. Pierce the former signed his own name in the usual and proper way. But Mr. Burgess paid visits for Dr. Pierce when he was not the authorised deputy, and the register showed three visits which were paid by Mr. Burgess where the particulars were filled in in his (Mr. Burgess's) handwriting and signed by Dr. Pierce in his own writing. Either before or after these visits Dr. Pierce must have written his signature. Other registers, said the solicitor, showed similar irregularities. With regard to the first charge the solicitor read certificates granted for the employment of young persons under 16 in factories, and declared that although they purported to be signed by Dr. Pierce the examination was made by Mr. Burgess, who signed Dr. Pierce's name. As to charge (*b*) the solicitor produced documents relating to several accidents in factories. At this time Dr. Pierce was living in London. Mr. Burgess visited the works and the injured persons and supplied the particulars to Dr. Pierce, who wrote them out the necessary papers in London and sent them, or at least some of them, to be posted in Manchester. The statement to which Dr. Pierce adhered his signature was this: "The cause of the accident was personally investigated by me at the works and the evidence of the injured person was personally taken by me." That was not correct, and the injured men if they had been called upon to produce the doctor's certificate in court in prosecuting a claim against their employers might have been placed in a serious position. The solicitor read some correspondence which took place between Dr. Pierce and Mr. Burgess, which he said showed that Dr. Pierce understood the gravity of the offence he was committing.

Dr. B. ARTHUR WHITELEGGE, chief inspector of factories, gave evidence as to the duties of certifying surgeons, and said that Dr. Pierce, who had been a certifying surgeon for 38 years, had now resigned. Up to the time these complaints were made Dr. Pierce had discharged his duties efficiently.

Mr. J. E. ASHWORTH, inspector of factories in charge of the Manchester district, also gave evidence, and, in answer to Mr. Griffithes, he said he did not regard Dr. Pierce's district as an exceptionally heavy one. It was about the average.

Do you find the registers, as a rule, are kept neatly?—

As a rule; if there are any irregularities we draw the doctor's attention to them.

Mr. BODKIN: The neatness of the registers would depend on the handwriting of the particular doctor.

WITNESS: Yes. We all know how doctors write.

Mr. E. A. BURGESS then gave evidence as to the various allegations made in the charge.

Mr. GRIFFITHES addressed the Council on behalf of Dr. Pierce. He read a declaration from his client in which it was stated that Dr. Pierce in 1872 was appointed to the position of certifying surgeon for South Manchester. Up to 1909 he held that post, and then resigned it on account of ill-health. During the whole of this period of service there never was any complaint against him until the one which had been brought forward to-day. He had inspected about 50 factories on an average in the week, and examined about 100 persons. It was necessary to do this work on five days of the week in order to meet the convenience of employers and employed. For several years he had suffered from gout. These attacks made him unable to discharge his duties as certifying surgeon. It was upon these occasions that he made arrangements with Mr. Burgess, and Mr. Burgess had been accepted as his substitute on former occasions. He was a thoroughly competent man, and in his (Dr. Pierce's) opinion it was a lesser evil to allow him to perform these duties than to cause great delays and inconvenience to employers and employed. Owing to deafness and the broken condition of his health he was unable to be present before the Council. He expressed his sincere regret as to the breaches of the regulations which had occurred. He appreciated the extent of his error for doing so, and he ought not to have allowed himself in his anxiety for the employers and employed to depart from the regulations. Mr. Griffithes said that these facts had been made in a statement that morning. He would be wanting in his duty if he attempted to say that Dr. Pierce was not doing wrong. There was a breach of the regulations of the Home Office which amounted to an irregularity, but it might perfectly well have been dealt with by the Home Office itself. He hoped to satisfy the Council that it was not a case for the exercise of their powers under the Act, and that his client had done nothing which would come within the description of infamous conduct. He went on to point out that Dr. Pierce had been living as much in Manchester as in London. He had rooms in Manchester where he received young persons for certificates and he had lodging where he resided. Surely as certifying surgeon he was at liberty to reside where he liked, provided he gave sufficient time to his duties and discharged them properly. Dr. Pierce had for 40 years been a member of the medical profession. He had broken the rule that he must personally discharge those duties. No doubt he had endeavoured to conceal this. It was only human to do so. The rule said that no standing deputy could be appointed without official sanction. At the same time the rule was not a reasonable one. It was obvious that serious inconvenience might be felt. There were duties to be performed by the certifying surgeon promptly almost every day. If the certifying surgeon were suddenly taken ill, and if the superintending inspector from whom he was to get the authorisation for the appointment of a deputy was not at hand, there might be a serious delay. He came now to what he regarded as the most important remark he had to make in Dr. Pierce's favour. The man whom he employed for his duties was a duly qualified medical man, who had before been authorised over and over again by the inspectors. There had been no delegation of duty to an unfit person. Mr. Burgess had assisted Dr. Pierce generally with the authorisation of the factory inspector on previous occasions. No human being had been injured by the breach of the regulations. The Home Office had got their returns. It was admitted that the passing of a mere piece of paper would have rendered regular what had been done irregularly. Could the Council, therefore, say that Dr. Pierce had been guilty of anything more than a breach of duty which might be forgiven to him? He asked the Council to believe that Mr. Burgess was exaggerating the extent of the unauthorised work which he did every day for Dr. Pierce.

Mr. WINTERBOTHAM briefly replied and laid emphasis on the fact that the correspondence of a private nature submitted to the Council showed that what had been done had been done deliberately by Dr. Pierce.

After deliberating in private,

The PRESIDENT, in announcing the decision of the Council, said: Mr. Griffithes, I have to inform you that the Council have judged Frederick Morrish Pierce to have been guilty of infamous conduct in a professional respect and have directed the Registrar to erase from the Medical Register the name of Frederick Morrish Pierce.

The next case was that of Robert Orr, registered as of Ceres, Fifeshire, M.B., Bac. Surg. 1901, Univ. Glasg., who was summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That you were on October 1, 1907, convicted at the Sheriff Court of Fife at Cupar of the following offence—namely, of assaulting a constable of the Fifeshire Constabulary while engaged in the execution of his duty. And that you were on July 6, 1909, convicted of the following offence—namely, of breach of the peace and of assaulting James Arthur, Helen White or Arthur, Catherine Dempsey or Kerr, and Catherine Quin.

Dr. ORR appeared in person but was not represented by counsel. He made a statement on his own behalf and said that in the case of the first conviction he had had extreme provocation. On the second occasion he had tried to intervene between some persons, and unfortunately he got the worst of it. He regretted that he had to appear before the Council.

The PRESIDENT: Were you sober on those occasions?

Dr. ORR: Yes, sir, in both cases.

After deliberating *in camerâ*,

The PRESIDENT said: Mr. Orr, the Council have given careful consideration to the question of your convictions and the circumstances connected therewith, and have decided to postpone judgment thereon till the May session, when you will be required to be present, and it will be in your interest to produce on that occasion testimony of a satisfactory character from persons of position in the neighbourhood in which you live as to your conduct and character in the interval.

The Council then adjourned until Friday, Nov. 26th.

BRIGHTON DISPENSARY CENTENARY.—The Brighton, Hove, and Preston Dispensary celebrated its centenary on Saturday last. The need of such an institution for the benefit of the poor of the town first impressed itself upon one Richard Phillips, a Quaker, and with the assistance of Dr. Tierney, afterwards Sir Matthew Tierney, physician extraordinary to the Prince of Wales, who afterwards became head of the medical staff, a meeting was called on Nov. 27th, 1809, which was presided over by the Earl of Chichester. At this meeting the following resolution was carried:—

That notwithstanding the liberal aid which medical gentlemen have extended to the poor, the establishment of an institution for administering to them advice and medicine gratis and for promoting vaccination would be attended with extensive advantage.

The first name of the institution was "The Brighthelmston Dispensary and Sussex General Infirmary" and for some years it had quite a nomadic existence. In 1847 the present building in Queen's-road was erected, and at the jubilee of the institution a branch was formed at Hove, and a Samaritan Fund was opened to enable medical officers to order nourishment for patients. In 1884 the dispensary still further increased its scope of usefulness by opening a branch in the north part of Brighton and thus the institution became what it now is, the Brighton, Hove, and Preston Dispensary. Then the Hove or western branch had to be removed, having outgrown its original quarters, and larger and more up-to-date premises were erected at a cost of £6000. Some little difficulty was experienced in raising this sum, but the debt is now cleared off with the exception of sums involved by new works at the Hove branch in connexion with the centenary. These have been carried out at a cost of £2400, and the premises were opened on Nov. 27th in commemoration of the jubilee of the inception of the western branch and the centenary of the parent institution. A considerable sum still remains to liquidate this debt of £2400; while also an appeal is being made, again in celebration of the centenary, to increase the endowment of the Samaritan Fund, the amount of which has remained the same for nearly 50 years, during which period the population of the borough has increased from 70,000 to over 150,000. In connexion with this fund a sum of £2500 is being asked for. About £400 have already been collected.

THE LANCET.

LONDON: SATURDAY, DECEMBER 4, 1909.

The Housing and Town Planning Bill.

WHEN the House of Lords dealt a second time with this very far-reaching measure, which is of such vital importance to the health and comfort of so large a portion of the community, the Peers had no grounds for complaining of the spirit in which their numerous amendments had been considered in the House of Commons. The attitude of Mr. BURNS was entirely conciliatory. Although he is not a man to regard half a loaf as better than no bread he was evidently anxious to see this useful measure, upon which he has expended such an infinite amount of trouble, inscribed upon the Statute-book, although the Lords had already deprived the Bill of not a little of its public utility.

Of the 181 amendments introduced by the Lords it was considered by the Government that not more than four or five were destructive of the principles and character of the Bill, and Mr. BURNS, on reviewing the whole position, thought the Bill ought to pass. The main principle underlying many of the Lords' objections practically amounted to distrust of the Local Government Board as an entirely unprejudiced and final tribunal in connexion with the compulsory purchase of land. It is difficult to obtain anything approaching perfection in most mundane affairs, but it seems to us that the least undesirable method of acquiring the land is that proposed by the Bill. It must not be forgotten that the lengthy and expensive method provided in previous Acts has been one of the reasons of the failure of such measures to bring about the objects for which they were passed, and if the hoped-for good results which are anticipated from the Housing Bill are to be realised simpler methods must be introduced. It cannot be denied that some of the procedures proposed in the Bill savour somewhat of bureaucracy, but, on the other hand, no responsible person has, so far as we are aware, brought any charges of bureaucratic methods against the Local Government Board in connexion with any of the multitudinous duties which devolve upon the officers of that department. What are known as provisional order methods are apt to lead to hesitancy in action and to the failure of the statutes which embody them as part of their machinery. As Sir WALTER FOSTER, an old Parliamentary Secretary of the Local Government Board, explained, the proposal that an order for the acquisition of land should be laid on the table of both Houses of Parliament was "a subtle method of delay," and we are afraid that several of the amendments introduced by the Lords have about them a suspicion of intentional procrastination. Another important amendment of the Lords was that which proposed to allow the landlord an appeal to the local county court against a notice requiring him to execute certain works, but this Mr. BURNS would not accept, although he eventually agreed to a compromise to prevent a deadlock. But perhaps the strongest position which the President took up in relation to any point of the Bill was in reference to the clause, which has the effect of putting an end to further erection of back-to-back houses, but which permits the erection of tenements placed back-to-back if the local medical officer of health certifies that the several tenements are so constructed and arranged as to secure effective ventilation of all habitable rooms in every tenement, a proviso which has apparently been introduced to get over the difficulty presented by blocks of model dwellings. The Lords endeavoured to obtain the same condition as regards back-to-back houses subject to certificate as to ventilation by the local medical officer of health, but, despite the representations from Leeds, where there is a local Act enabling back-to-back houses to be erected, and where the city council have expended over a million sterling in substituting good for bad back-to-back houses, Mr. BURNS asked the House to reject the Lords' amendment. All fair-minded persons must feel a certain amount of sympathy with Leeds, but, nevertheless, the strong action of the Government will meet with the support of nearly all sanitarians.

In Part III. of the Bill the Commons had introduced a clause giving to the Local Government Board power to prescribe the general duties of the county medical officer of health, and also providing that these officers shall have a right to appeal to the Local Government Board against dismissal. We think that Mr. BURNS was right to insist upon the retention of this clause. It was urged by speakers in both Houses that this provision was not necessary, but everyone really familiar with the work, either practically or through their annual reports, of county medical officers of health must feel that a provision of this nature will enormously strengthen the hands of these officers, who will now be brought, as Sir WALTER FOSTER observed, into intimate relations with property owners. Having regard to the multitudinous interests affected by the Bill everyone anxious for better housing must have welcomed the fact that when the amendments of the Commons were finally dealt with in the Upper House the Lords evinced a conciliatory spirit and that, with one exception, practically all the points upon which the Commons had insisted were allowed to remain as they were, while as regards the outstanding difficulty with reference to the compulsory acquisition of land a compromise has, we are glad to see, been arrived at, and thus the controversy between the two Houses has been ended and the Bill awaits the Royal consent.

We cordially congratulate Mr. BURNS upon his eminently statesmanlike conduct of this measure through the House of Commons, and although, as we have said, the Bill has been shorn of some of its strength it still contains provisions of the highest possible value which, if vigorously applied, should largely transform the conditions under which a large section of the relatively poor at present spend their lives.

Spinal Anæsthesia.

THE position which spinal anæsthesia is destined to hold in the field of surgery in the future is not yet clearly to be discerned. Its true claims, indeed, at the present day are not very easy to state with precision, for it is a comparatively new venture and its methods are not yet certain, nor are the opinions as to its value amongst those who are practising it by any means unanimous. The latest development of the method, one for which its author claims the attainment of absolute safety, has recently been shown in London, and this demonstration makes timely a few remarks upon the general question of anæsthesia without loss of consciousness, and upon M. JONNESCO'S method in particular. This method, as many of our readers are aware, has for its distinguishing feature the addition to the analgesic drug of a certain proportion of strychnine. The neutral sulphate of strychnine is employed and it is added in amounts which vary from ½ milligramme to 1 milligramme. This is used with a quantity of stovaine varying from 1 up to 10 centigrammes, and the amount of liquid injected never exceeds 1 cubic centimetre at a time. The smaller quantities are used in young or feeble subjects and in the high injections, the larger quantities in adults and in the lower injections. The high injections are made between the first and second dorsal, the lower between the twelfth dorsal and the first lumbar spines. No care is taken to keep the patient's head raised above the level of his spine, if for the operation any such position as the Trendelenburg is desired; indeed, when an anæsthesia of the face, or skull, or neck is desired M. JONNESCO places the patient almost directly after the injection in a horizontal or head-down position. It will be seen, then, that the fears which have been hitherto held of this position, fears based upon an apprehension that the bulbar centres might be paralysed, are put aside as groundless, and that they are so M. JONNESCO claims to be the result of the addition of strychnine. He believes that this acts more quickly than the stovaine and stimulates the bulb so effectually that the subsequent paralysing action of the stovaine is unable to do harm. It is obviously too early to talk of absolute safety in connexion with a procedure that has stood the test of only about a hundred and twenty cases. But there is at least evidence to show that a proceeding, which was hitherto thought to be attended with certain danger, *can* at any rate be accomplished without disaster. In all matters of anæsthesia it is essential to insist upon a high standard of safety, and experience in the past has shown how great may be the expenditure of life involved by the too hasty adoption of a new method or drug as being absolutely safe. We need only refer to the wide and haphazard way in which ethyl chloride was at first used, and the many fatalities that occurred before the potency of and the proper way to employ the drug were finally recognised, to make clear how necessary it is that every development in anæsthetics should be approached with care and rigidly tested.

Spinal anæsthesia does not appear to be welcomed so warmly in Great Britain as in some of the continental countries, and we believe that the main reason is that there is less cause to be dissatisfied with the use of general anæsthetics here than there is abroad. We talk a good deal of our defaults in the matter, but we appear to be ahead of many of our neighbours. Whether it is because in these islands chloroform was first used and nitrous oxide discovered, while ether, introduced by a man of the English-speaking race, was given a ready acceptance—whether it is this inheritance or for some other reason, the fact remains that in Great Britain we have a number of medical men devoting their professional efforts entirely, or almost entirely, to the study and practice of anæsthesia. This is not the case on the continent, where the administration of anæsthetics is more often left in the hands of the comparatively inexperienced, while the operating surgeon is held responsible for the results. The requirements of modern surgery make such a condition of affairs very dangerous, and this appears to be felt in Roumania, for M. JONNESCO has alluded to the anæsthetist as a person "often inexperienced and never responsible." This being the case we can well understand the eagerness with which surgeons in Roumania have welcomed a method of producing anæsthesia that they can take into their own hands. And the Roumanian surgeons seem to have a more docile material to deal with than the British patient is likely to be, and just as in other affairs of life morals have been said to be merely a "matter of geography," so there may be a racial side to the administration of anæsthetics. We were awakened to this point of view by the very striking slides illustrating M. JONNESCO'S lecture before the Royal Society of Medicine. Much that appeared usual and unobjectionable to the patient in Bukharest would be regarded as intolerable by the average hospital patient here. Now may there not be something of the same difference between Roumanian operators and anæsthetists and British operators and anæsthetists in our estimation of the absence or presence of pain? May it not be that the patient under spinal anæsthesia with occasional evidences of discomfort, if not of actual pain, would make the British surgeon uncomfortable and dissatisfied in a manner that does not so easily happen to his *confrères* abroad? The same racial differences affect the patient too, and we suspect that an amount of mental anxiety and distress may be experienced by the conscious patient which would be strongly objected to by our own countrymen and women, even if they felt no physical pain. M. JONNESCO claimed it as one of the great advantages of his method that consciousness is not abolished. There are, however, certainly many persons who would prefer to know nothing of what is going on whilst they are undergoing an operation, even though there are, no doubt, some who dread losing consciousness.

There are some fields of practice in which the value of spinal anæsthesia would be, it appears to us, immense. In naval and military work, for instance, the simplicity and portability of the apparatus required and the possibility of being able both to anæsthetise the patient and to operate single-handed would be of great advantage. Similarly, for emergency operations in country districts to be able to employ this method would often be of the highest service. Moreover, if its claims to be as safe as general anæsthesia in good hands should be established, there will doubtless be some patients who will

prefer its employment in their case. For these reasons, then, it is a method well worthy of prolonged study, and we shall note with interest its records during the next few years.

The Odontological Collection of the Royal College of Surgeons of England.

BY a happy coincidence the Council of the Royal College of Surgeons of England was able, while celebrating on Dec. 2nd the jubilee of the right of the College to grant Licentiateships in Dental Surgery, to open for inspection the most extensive and valuable collection of specimens ever brought together to illustrate the anatomy, evolution, and pathology of the teeth. The coincidence was even happier than most of those who took part in the opening ceremony were aware, for the movement which induced the College to acquire the power to grant dental diplomas also led to the foundation and expansion of the collection now entrusted to the care of the College. That movement was set on foot some 55 years ago by the leading dentists of England, who were dissatisfied with the status and conditions of their profession. They combined to petition the Council of the Royal College of Surgeons to secure their status and to confer a diploma—a petition which was granted in 1859 after four years of consideration and negotiation. Out of the combination thus formed grew the Odontological Society of London, a designation changed to that of Great Britain at a later date. Although drawn together for the domestic legislation of their calling the new society, in the words of its first president, Mr. SAMUEL CARTWRIGHT, F.R.S., had as its main object the "collection and diffusion of knowledge relating to their profession"; and the scientific as well as practical nature of its published Transactions quickly raised it to a prominent position. In the second year of its existence, as a matter of chance rather than of design, the society began to accumulate specimens as a means of perpetuating as well as diffusing knowledge—a practice that was soon recognised to be of great value for the progress of knowledge. In 1872, 16 years after the society was founded, about 850 specimens had accumulated in what had gradually come to be called "the museum," and a printed catalogue of the collection, making 77 pages, was prepared by the curator of that date—Mr. CHARLES S. TOMES—and published for the society by Messrs. WYMAN and SONS. In 1882 a second edition was prepared by Messrs. W. and H. WEISS under the direction of the curator, Mr. S. J. HUTCHINSON. The number of specimens then amounted to 2000. A third edition was prepared by the present honorary curator, Mr. J. F. COLYER; the number of specimens—acquired by purchase in some cases, but mostly as donations from members of the society—then numbered over 4000. Under Mr. COLYER'S care the collection grew rapidly in size and value. The cases alone in which the specimens were shown had cost the society over £1500. The collection by this time represented every branch and form of dental activity; it was a scientific collection in the strict meaning of the word. Many of its specimens were unique and could not be purchased or acquired to order, and from a monetary point of view it must have cost a large sum.

In 1907, when the Odontological Society became merged in the Royal Society of Medicine as its Odontological Section, many of those most interested in the future of their museum began to realise that the bantling they had nurtured was beginning to assume rather too large a size for the space and finance at their disposal. The collection had reached a point when it became of national importance and deserved a place where it might be consulted by all medical men; so the dentists approached the Council of the Royal College of Surgeons of England through the members of their own council, of which Mr. J. H. MUMMERY was the President. Sir HENRY MORRIS, Bart., was then President of the College, and Mr. HENRY T. BUTLIN, now President, was the chairman of the Museum Committee. All these entered into *pourparlers* in a public spirit. It was found that in order to secure a suitable room for the exhibition of so large a collection it would be necessary to make considerable structural alterations in the College Museum, involving an outlay of some £600 or £700, and that it would require about £200 a year for maintenance. Negotiations between the Councils of the College and of the Odontological Section were brought to a successful issue in June of the present year, the College accepting the collection as a trust, undertaking to maintain the collection in its entirety and to permit certain privileges of access to those who wish to carry out researches in connexion with the collection. To secure a maintenance of the close relationship which had existed between the collection and the Odontological Section of the Royal Society of Medicine, the original owners accepted the right to appoint five trustees to inspect the collection from time to time, and also to nominate an honorary curator to assist the conservator of the College Museum in arranging and improving the collection. As soon as negotiations were completed steps were at once taken by the Council of the College to carry out the necessary structural alterations in the Museum and other preparations which have been now carried out most successfully according to plans prepared by Mr. E. C. FRERE, A.R.I.B.A. The collection was removed from the premises of the Royal Society of Medicine in Hanover-square to its new quarters in Lincoln's Inn-fields by the servants of the College—without a single breakage—where it is now installed. The new odontological room, more commodious than the old, has three large windows which open on Portugal-street, and is also well provided with artificial light—an advantage it enjoys over the rest of the College Museum. A rearrangement of the specimens was necessary in order to admit the addition of the large collection of odontological specimens—both anatomical and pathological—from the College Museum. The specimens added from the College Museum, although they form a minor part of the collection, constitute one of the most valuable sections. The present arrangement of the odontological room must be regarded as a provisional one, for it is expected that at least a year will be necessary to classify and catalogue the collection in a permanent form. The wealth of the material which has been gathered to

secure a sound foundation for the progress of odontological knowledge is already very evident. The first case, which is intended to serve as an introduction to the whole, contains the specimens prepared by HUNTER to illustrate his classical work "On the Natural History of the Human Teeth," 1771—the teeth he burned to demonstrate the arrangement of enamel, the teeth he transplanted, the teeth at one time stained by madder—now, alas! the colour is gone—to show the manner in which they grew. It is most fit that the collection should have such an introduction, for no man did more than HUNTER to place the practice of the dentist on a scientific foundation. The second case illustrates the anatomy and development of the teeth, many of the specimens being preparations by HUNTER. The third case contains specimens illustrating the anatomy of the jaws and mechanism of mastication. The fourth and fifth cases contain a most extensive series of specimens illustrating the eruption of the teeth, many of them donations from Sir JOHN TOMES and from SAMUEL CARTWRIGHT, F.R.S. The sixth case is devoted to the dentition of the various races of mankind The seventh to the thirteenth cases are set aside to illustrate the comparative anatomy of teeth. The large section given to comparative dental pathology is a complete illustration of the numerous and important contributions made to the Transactions of the Odontological Society during the last 50 years. Every conceivable—some of them almost inconceivable—abnormality in the size, shape, arrangement, eruption, and implantation of the teeth is richly illustrated. Malformations and diseases of the jaws, diseases and tumours of the teeth, have their full representation Amongst the most interesting sections are those devoted to dentures, artificial teeth, and dental instruments. The evolution of the plate, of the artificial tooth, and of the extraction forceps tells a story of rapid development.

We publish this week a letter from Mr. R. CLEMENT LUCAS urging the creation of a research and teaching demonstratorship in connexion with this dental museum "for the modest sum of £10,000." If such a modest sum be forthcoming there can be no doubt that it would be well expended in the scientific tilling of such a rich field as the new dental museum affords. It must be remembered that the collection, though excellent, is not complete, and it is to be hoped that the public spirit which has made it what it is will ensure its ultimate perfection, for it is a national collection brought together by the Odontological Society and maintained by the Royal College of Surgeons for the use of every serious student who desires by study and research to improve the means for securing the health of the teeth. To a very considerable extent that also implies the happiness of a nation.

PROPOSED COTTAGE HOSPITAL FOR ST. AUSTELL (CORNWALL).—A public meeting was recently held at St. Austell, when it was unanimously decided to erect a cottage hospital for the town and district. The late Mrs. Doidge has bequeathed £500 towards the building provided the institution is established by July, 1911, and the chairman remarked that with such a substantial donation it was practically certain that the hospital would be completed by the specified date.

Annotations.

"Ne quid nimis."

THE SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE, LONDON, 1913.

A MEETING of the National Committee for Great Britain and Ireland of the International Congress of Medicine was held at the rooms of the Medical Society of London on Thursday, Nov. 25th, Dr. F. W. Pavy, F.R.S., President, in the chair. There were present Sir William S. Church, Bart., Sir Thomas Barlow, Bart., Sir Dyce Duckworth, Bart., Sir John Tweedy, Sir Malcolm Morris, Sir Shirley Murphy, Professor W. Osler, Mr. Butlin (President of the Royal College of Surgeons of England), Dr. D. Ferrier, Deputy Inspector-General J. J. Johnson, R.N., Dr. J. F. Gordon Dill, Dr. W. P. Herringham, Dr. A. E. Garrod, Dr. Donald W. C. Hood, Dr. J. F. Goodhart, Mr. W. H. H. Jessop, Dr. StClair Thomson, Mr. Hunter F. Tod, Mr. L. Eliot Creasy, the honorary secretaries (Dr. Clive Riviere and Mr. D'Arcy Power), and others. Mr. D'Arcy Power read a report on the Sixteenth International Congress of Medicine, which was held at Budapest at the end of August. The British contingent numbered 94, and the meeting was said to have been very successful and to reflect great credit on the executive committee. The report pointed out that the Congress had decided to appoint a permanent committee consisting of the presidents, the secretaries, and some members of the various national committees. The permanent committee was not to number more than 50 members and there was to be a secretary paid out of the funds of each forthcoming congress. The offices of the permanent committee were to be at The Hague. Dr. Pavy notified to the meeting the acceptance of the invitation of the National Committee for Great Britain and Ireland, with the approval of His Majesty's Government, to hold the Seventeenth International Congress in London in the year 1913. It was thereupon proposed by Sir John Tweedy, seconded by Sir Dyce Duckworth, and carried unanimously, that a general committee be formed to undertake the organisation required for the meeting of the Congress in London. It was further proposed by Sir William Church, seconded by Mr. Butlin, and carried, that the National Committee for Great Britain and Ireland be dissolved and immediately reconstituted as the general committee for this purpose, the general committee having power to add to its numbers. It was decided that the first meeting of the general committee should be held in February next, the officers of the National Committee holding their present positions until new officers were nominated and elected. Professor Osler moved that it be an instruction to the general committee to see that the colonies are adequately represented in all matters connected with the Seventeenth International Congress of Medicine. The meeting ended with a vote of thanks to the Medical Society of London for the use of the meeting room. Mr. D'Arcy Power and Dr. Clive Riviere will be glad to receive the names of those who are interested in the forthcoming Congress as soon as possible.

THE MEDICAL MAN AS SOCIAL REFORMER.

IN a paper under the above heading which appeared in the *Edinburgh Medical Journal* of November Dr. Lachlan Grant advocates some sweeping reforms in medical service generally, with perhaps special attention to public health. He begins by calling attention to the fact that of recent years the medical man has become recognised as "an all-important factor in the life and progress of the people," and goes on to refer to the duty laid upon medical men of

improving the public health and social conditions in general. But he reminds his readers that medical officers of health are neither ubiquitous nor all-powerful and that the private medical practitioner in most cases cannot afford to jeopardise his bread and butter by agitating for the removal of evils for the continuance of which public apathy, private interests, and the fear of raising the rates are responsible. All this has been said before, but it will bear repetition if there is no exaggeration. From this point Dr. Grant is led to his first thesis, that "there should be a reorganisation and a coördination of all medical and public health activities, dealing with all hospitals, dispensaries, factories, workshops, warehouses, mines, railways, ships, hotels, schools, restaurants, and private dwellings." Further, "all hospitals, infirmaries, convalescent homes, and nurses' training schools and institutions should be taken over and kept up by the public authorities," and there should be established "a separate independent governmental department for the administration of public health, with a political chief of the dignity of a Cabinet Minister." This is a programme of destruction and construction more complete than is projected by the reports of the Royal Commission on the Poor-law, and we are sure that the country is not yet ready for the complete nationalisation of the medical service, however clear it is that some drastic reforms of existing methods are imminent. The establishment of a Minister of Public Health is much to be desired, but until a Government arises which will have the courage to avoid wasting its time upon what a sixteenth century author (Erasmus, if we remember rightly) called "vermiculate disputations," we doubt if such a desirable consummation will be effected. That various social reforms are much needed is a truism obvious to everyone; neither is their need confined to this country alone. The exodus from the country into the towns, the stress of modern industrialism, the decline in the birth-rate, and the ominous fact that the most prolific portions of the body politic are the wastrel and the unskilled worker, are signs of decay which are to be seen in almost every European country. But although the subject is so vast that a remedy cannot be formulated which will at once cure all the evils in evidence, yet that is no reason why those in power should not seek some means for, at all events, a commencement of improvement, and for that commencement such suggestions as can be found in Dr. Grant's paper and elsewhere merit consideration. They should make people think.

AN "ILLUMINATING" SOCIETY.

THE formation of a society which, in the words of Professor Silvanus Thompson, has been founded "to bring together all those who are interested in the problems, practical and theoretical, of the art of directing and adapting light," will be welcomed. The rapid development in methods of illumination during the last few years has made for both the convenience and inconvenience, the comfort and discomfort, of man. The race for a supreme light has been directed to producing intense illumination without regard to the healthy requirements of the eye. The brilliancy of the artificial light has been considerably increased, but little attention has been given to new means of diffusing it. When the source of light is concentrated at a given point the eye shrinks at the glare and dazzle of the rays, whereas if the intensity of such a light could be distributed the result would be pleasing and comfortable. Questions of in-door artificial lighting also are questions of considerable hygienic importance, and yet little has been done to help us in the choice of a light in relation to its effect upon the eyesight. So far we have been at the mercy of the lamp-maker and the fitter, who as often as not exhibits complete ignorance as to the best situation for a lamp. The subject has long called for investigation, and as the work of inquiry proceeds it will not be surprising if certain disorders are definitely traced to faulty methods of illumination. We wish success to the Illuminating Engineering Society, which held its first meeting at the Royal Society of Arts on Nov. 18th last, and the next meeting of which takes place on Jan. 11th, when a discussion on "Glare, some of its Effects and Causes," will be opened by Mr. J. H. Parsons.

HOOK-WORM DISEASE IN THE SOUTHERN STATES OF AMERICA.

THE announcement made recently that Mr. John D. Rockefeller had given £200,000 to be employed in the effort to extirpate hook-worm disease from the Southern States has drawn attention to the extreme prevalence of the disease in that portion of the United States.[1] Few persons on this side of the Atlantic have any conception of how great a scourge the small nematode—ankylostoma duodenale—is in the southern part of North America. It is a somewhat curious fact that the negroes of the Southern States, although it is suspected that they were instrumental in introducing the disease, do not suffer to any marked extent from it. They seem to have acquired immunity. It is the poorer white inhabitants of certain districts of the South who are notorious for their shiftless, lazy habits, who seem to be without energy and without vigour—so much so, indeed, that they are colloquially referred to as "mean white trash"—who are the sufferers. Their unfortunate physical and mental condition is largely ascribable to the effect of ankylostomiasis, or, as the malady is termed in America, uncinariasis. Dr. Charles Wardell Stiles, chief of the Division of Zoology of the Hygienic Laboratory of the United States Public Health and Marine Hospital Service, has stated that in his opinion the inferior mental, physical, and financial condition of these poor whites is an important pathological factor. An American correspondent writes on the subject as follows:—"The extent to which the disease prevails is a matter of some surmise. It has been estimated that 700,000 of the inhabitants of Puerto Rico are carriers of the hook-worm, and that 90 per cent. of the total population of the island are infected. Some observers in South Florida have stated that a like percentage of the population of that state suffer from the same cause, while other American statisticians assert that at the present time there are 2,000,000 southerners, mostly children, afflicted with hook-worm disease." The prevention of the disease is not difficult in theory, but in practice it will undoubtedly prove by no means easy if there is anything like the prevalence indicated. The main measure to be adopted, which if effectively carried out may be sufficient in itself to stamp out the disease, is careful disposal of excreta. It is known that the ova of the parasite although deposited in the human intestine do not develop there, but pass out with fæcal matter and develop in the soil. Therefore if fæcal contamination of the soil be prevented ankylostomiasis should be extirpated. But to carry a campaign of this kind to a successful issue requires not only a very large sum of money, but necessitates on the part of those to whom the work is entrusted the employment of infinite care and perseverance. The habits of shiftlessness and indifference to the laws of health are doubtless thoroughly ingrained in the people of the Southern States of America, and to remove their prejudices and to induce them earnestly to coöperate in measures of sanitary reform will be a task of unusual magnitude. However, the names of the commission now

[1] THE LANCET, Nov. 27th, 1909, p. 1637.

chosen to conduct this crusade should be a sufficient guarantee that, in any event, the question will be approached with a full knowledge of its difficulties and also of the best means to overcome them. Although not perhaps material to the matter, it is interesting to note that Stiles and Looss now hold that the American species of hook-worm should not be classed with uncinaria and the name of necator Americanus has been suggested. With regard, too, to the causation of the anæmia of ankylostomiasis opinions differ somewhat. As to whether it is produced by blood abstraction, to venom secreted by the head glands of the parasite, or to secondary infection, Dr. L. W. Sambon in 1908, referring to these points,[2] was inclined to favour the microbic theory of causation. Stiles, discussing the same points in Osler's "Practice of Medicine" has said: "The constant drain on the system by the sucking of blood can no longer, as formerly, be regarded as the chief cause of the anæmia. Through the wounds bacterial infection may take place; the wall of the bowel may be much thickened and degenerated, so that its functions are interfered with; and lastly, it is quite possible that toxic substances are produced by the parasites which act injuriously upon the patient." The Rockefeller Commission should clear up some of the obscure features in connexion with the disease.

THE INCREASE OF POPULATION IN ENGLAND AND WALES.

THERE is something apparently paradoxical in the statistical fact that, in spite of the marked and steady decline of the birth-rate in England and Wales, the actual number of births continues to increase. The obvious explanation of this fact is, however, that the excess of births over deaths in this country is still causing a steady and rapid increase of population, notwithstanding the decline of the birth-rate. Moreover, the decline in the birth-rate has been accompanied by a marked and steady decline in the death-rate, which has to some extent counterbalanced the effect of the reduced birth-rate upon the increase of population. During the five years 1871–75 the mean annual birth-rate in England and Wales reached its maximum, and was equal to 35·5 per 1000; the mean death-rate during the same period was 22·0 per 1000. Thus the annual natural increase of population during this quinquennium was equal to 13·5 per 1000. During the most recent completed quinquennium, 1901–05, the annual birth-rate had fallen to 28·1 and the death-rate to 16·0 per 1000. Thus the mean annual natural increase of population, which had been equal to 13·5 per 1000 in 1871–75, did not fall below 12·1 per 1000 during the five years 1901–05. While, however, the rate of natural increase of population, notwithstanding the marked decline of the death-rate, showed a distinct decrease during the 30 years referred to, the annual number of registered births continued to increase, owing to the constant additions to the population by excess of births over deaths. During the five years 1871–75, with a birth-rate of 35·5 per 1000, the average annual number of births registered in England and Wales did not exceed 831,735; whereas in the five years 1901–05, although the birth-rate had fallen to 28·1 per 1000, the average annual number of registered births had increased to 938,654. Similarly, notwithstanding the decline during the 30 years of 1·4 per 1000 in the annual rate of natural increase of population, the actual numbers annually added to the population, which averaged 317,185 during the five years 1871–75 had increased to 404,341 during the last completed quinquennium, 1901–05. Thus while both the birth-rate and the rate of natural increase of population had distinctly and continuously declined during the 30 years, the number of registered births and the amount of natural increase of population continued steadily to increase. It is interesting to note that while the mean-rate of natural increase of population, by excess of births over deaths, was equal to 12·1 per 1000 during the five years 1901–05 in England and Wales, it was during the same period equal to 14·3 in the German Empire, 14·2 in Denmark, 14·1 in Norway, 10·7 in Italy and in Belgium, 10·6 in Sweden, 10·4 in Switzerland, 9·2 in Spain, and only 1·6 per 1000 in France. The population of England and Wales is therefore still increasing, by excess of births over deaths, at a greater rate than that of most of the Continental States.

[2] THE LANCET, Sept. 5th, 1908, p. 740.

SARCOMA FOLLOWING FRACTURE OF THE FEMUR.

IN the October number of the *International Journal of Surgery* there is reported by Dr. Norman P. Geis of Brooklyn a case in which sarcoma followed a fracture of the femur. The patient was a boy aged 17 years. He was born in Russia and worked at a rubber factory. Five years previously he had undergone an operation in Russia, but he was unable to give much information about it. All that he could say was that he had had a large swelling on the right side of the lower jaw and that something had been wrong with the bone. At the site of the operation was a scar one and a half inches long. For six months before his accident he had had pain in the right leg extending from a little above the middle of the femur to the instep. The pain was sharp and shooting but intermittent in character. He saw a medical man who prescribed a liniment which seemed to give some relief from the pain. Exercise did not appear to cause any increase of the pain. On Dec. 2nd, 1908, he was pulling a truck when he slipped and fell flat on the abdomen. He immediately felt severe pain in the right thigh and found that he could not use it. He was seen by two medical men who diagnosed dislocation of the hip. Four days later he was treated at the Williamsburg Hospital, where a diagnosis of fracture of the neck of the femur was made, and he was treated with a plaster-of-Paris splint. Nine weeks later the splint was removed, good union was found to have occurred, and he was able to walk about the ward on crutches. Soon after the removal of the splint he noticed a slight swelling at the site of the fracture. This slowly enlarged, and pains like those he had felt formerly appeared, but were more acute, especially at night. The thigh continued to enlarge until when he was first seen by Dr. Geis, it measured 10 inches more than the left immediately below the hip. The thigh was tender on pressure, and the superficial veins were well marked. The swelling was most pronounced anteriorly and externally, and the glands in the right groin were swollen. The general condition of the patient was poor. A skiagram was taken and it showed a sub-periosteal sarcoma. A sufficient number of cases have now been published to make it practically certain that some causal connexion does exist between fracture and the appearance of a sarcoma, but it is difficult to give any very satisfactory explanation of this association. It has been suggested, on the one hand, that the bone has broken because of the previous presence of a sarcoma at the site where the bone has given way, but in many of the cases a very definite interval has occurred between the infliction of the injury and the earliest sign of tumour. Another explanation that has been given is that the mere injury is sufficient to incite the formation of a sarcoma. In the case which we have reported the presence of the pain existing in the limb for six months preceding the

fracture suggests strongly that some abnormal process had then already commenced, and it would be difficult to disprove the suggestion that this abnormal condition was even then sarcomatous. The prognosis of sarcoma of the thigh occurring in these circumstances is very bad, for if amputation at the hip be performed recurrence is almost certain.

CLEAN SHAVING AS A PROPHYLACTIC MEASURE.

A FREQUENT correspondent writes to us that he has noticed that clean-shaven persons appear to enjoy a kind of immunity from the common cold, "at all events," he says, "they seem to be attacked less frequently than those who cultivate the moustache." He suggests that the daily shaving may prove an antiseptic process which regularly removes pathogenic organisms which otherwise lurk and grow in the moustache. It is, of course, conceivable that the moustache affords a nursery for organisms, especially as it must be moist, and occupies a position close to the breathing intake. Further, it is reasonable enough to assume that the daily shave does, as a matter of fact, amount to a regular antiseptic routine. The moustache is obviously difficult to clean thoroughly and it is open to doubt whether mere washing completely sterilises it. Even if that should be the case, the moustache would soon be full of organisms again, as it is constantly exposed to a stream of air which is rarely sterile. According to our correspondent's view, however, there should be a similar immunity enjoyed by women unless we lay stress on the fact that no method in their toilet amounts to the drastic cleansing process of the razor and soap. Moreover, fine downy hair is natural to the lip of women and children. The observation is an interesting one, and its author sends some confirmation of his view in the shape of details of cases in which the subjects, while regular sufferers from common cold when they wore a moustache, seem to have enjoyed a comparative immunity since they have shaved clean.

PHYSIOLOGICAL EFFECTS OF TRAINING ON THE SOLDIER.

A FOURTH report by the War Office Committee on the Soldier's Food, Training, and Clothing, presided over by Sir Alfred Keogh, has recently been issued, containing the results of experiments on marching in the new Mills-Burrowes equipment, as compared with the equipment hitherto in use. In the committee's second report it had been urged that progressive training in marching was most necessary for the recruit; and (as one important point) that orders should be given to the men to open the jacket and shirt in warm weather, so as to allow free evaporation. In the new pattern, even in full marching order, the belt can be unbuckled, thus avoiding constriction of the body; the water-bottle and haversack have no body-straps, and all the ammunition is carried in the belt and side straps, which are arranged as braces; the chest is therefore as free from constriction as possible. Details are now given of the amount of moisture lost by the body and gained by the clothing, with the old and new patterns of equipment respectively; the advantage is seen to lie with the new pattern, the loss of moisture from the body and its increase in the clothing being on an average less with the new than with the old equipment; on every trial (but one) the air temperature was higher when the new than when the old equipment was tried. The new pattern is slightly heavier than the old by nearly two pounds in drill order, but by only half a pound in full marching order, although 50 more rounds of ammunition are carried. The jacket can be easily opened and the shirt exposed in the new pattern; in the old the belt and straps do not allow of this, and the bandolier causes constriction of the chest, which is objectionable. The new equipment can be thrown off, or put on, with one simple movement, so that advantage can be taken of any short halt to give complete relief to the chest; this is impracticable with the old pattern. One drawback is mentioned in the new as well as in the old pattern: it fits close to the back, causing excessive perspiration; this might be obviated. The committee considers that the present clothing of the soldier is suitable for his work, except that there appears to be "a tendency to increase the height and tightness of the collar"; this, of course, is a "reversion to type" from the low open collar that was adopted as a result of South African experience. The committee also thinks that the full equipment is comfortable and not excessive in weight for a properly trained man. The field-service cap is sufficient protection for the trained man accustomed to exposure to sun, but for most members of the Territorial Army it thinks a light slouch hat would be more suitable. It again urges that "it be an instruction to officers commanding that the order shall be given to men on the march in warm weather to open the jacket and shirt," as it has found that this is not generally the practice; presumably the feeling for "smartness" still stands in the way of this desirable innovation. This appears to be the committee's final report. It warmly acknowledges the work of the secretary, Captain L. E. L. Parker, R.A.M.C., who conducted experiments in the field and in the laboratory in addition to his secretarial duties. We think acknowledgment is also due to the committee for its valuable work, and especially to the member who did the experimental marches of 14 miles on several occasions in full marching order under a blazing sun.

"NEURASTHENIA QUERULATORIA" AND ITS RELATION TO TRAUMA.

So much attention is directed in these days to the question of industrial compensation, and its application has been so much widened, that it is important for medical practitioners to keep abreast of current doctrine and practice in regard to this most difficult subject. In Germany and Austria in particular, if we are to judge by the output of monographs and articles, and even journals, devoted to the subject, litigation over accidents and the sequelæ of accidents has become annoyingly common. Several recent articles have drawn attention to an all-important, if at first sight somewhat subtle, distinction between the sequelæ of an accident and the sequelæ of the law relating to accidents, between a traumatic neurosis and a "fight-for-compensation" neurosis, to give a literal rendering of the German expression. We may illustrate the point by a case from an interesting communication by Dr. Kurt Mendel in the *Neurologisches Centralblatt* for November. In the year 1905 an apparently strong young adult received a trifling accident in a locksmith's workshop, and so-called traumatic neurasthenia followed. Although medical opinion ere long certified that he was fit for work again, he never ceased complaining, and the idea of getting further compensation from his employers—in addition to what had been voted him—never was absent from his mind. He left the locksmith's trade and became an employee of a railway company, where he worked for 10 hours a day in a perfectly satisfactory manner. On July 17th, 1907, and again on Oct. 14th, 1907, he had accidents in the engine yard, but in spite of these he wrote to the railway company that he was quite well in every way. The date of this letter was Oct. 23rd, 1907. At this time, be it observed, he was still claiming compensation from his original employers, but when in the summer of 1908 the futility of expecting further

payment from that source was impressed on him his methods changed, and on Oct. 25th, 1908, he wrote a letter to the railway company in which he complained of the usual symptoms, and attributed everything to the two railway accidents. Examination in May of this year showed him to be suffering from tremor of the eyelids, tongue, and hands; the whole body was hypalgesic, the reflexes increased; the mental condition was one of constant querulousness and discontent. When he was offered light work in a garden he refused, saying that he was not yet a lunatic. Dr. Mendel considers this an instructive instance of what might be called neurasthenia querulatoria, in which a characteristic mental and physical neurasthenia supervenes not as the direct result of an accident, but because of litigation pending, with its alternate hopes and disappointments. After the first accident the patient recovered so completely as to be able to work 10 hours a day, and on his own admission he was fit for this work, but the idea of obtaining further compensation remained as the provoking cause of a whole train of mental symptoms which soon expressed themselves in bodily signs. In the same article other cases, equally illustrative, are quoted. Needless to say, treatment of such patients is most unsatisfactory. Some make it a rule not to treat accident cases until litigation is at an end. Dr. Mendel says the only way to make them useful members of society again is to recommend the cessation of all payment, and this plan he has unhesitatingly adopted in a number of cases with most encouraging results.

DEATHS FROM WILD ANIMALS AND SNAKES IN INDIA.

IT is a remarkable fact that in spite of the opening out of the country by railways and roads and the clearing of jungle tracts the number of persons killed by wild animals in British India does not show any decrease; in fact, last year the figures rose to 2166, an actual increase of 200 in comparison with the deaths in 1907. In Bengal tigers killed 100 more persons, while in the Central Provinces and Berar the increase was 64. In the Chanda district one tiger alone killed 19 people before it was shot, while panthers and bears accounted for 95—practically double the total of the preceding year. In the United Provinces the mortality was 194 against 159. This increase was due to the ravages of leopards and wolves in the Kumaon and Fyzabad divisions respectively. Leopards seem to abound in Kumaon, and one particularly given to man-eating was still at large at the close of the year, though a reward of Rs. 500 had been offered for its extinction. In Bahraich wolves have become so dangerous that special measures have been taken for their extermination. The number of cattle killed was 87,697—a decrease of some 1200. In the United Provinces, however, there was a remarkable rise; and in the Almora district this is said to have been due to the wholesale destruction of game, which has resulted in a serious diminution of the natural food-supply of tigers and leopards. It may be noted that in the Kumaon district wild dogs do great mischief, though the Forest Department has entered upon a campaign against them. Evidently there is much work still for the sportsman in various parts of India and there is no necessity to accept any plea for the preservation of the tiger, leopard, or wolf. As to the deaths from snake-bite, the decrease was very satisfactory, the numbers falling from 21,419 to 19,738. This total was the lowest since 1897, and every province shared in the decrease. The official report states that the success of the Lauder Brunton treatment is on the whole encouraging, although the usual uncertainty as to the identification of the snake in the majority of cases still continues. The Commissioner of Agra reports that the villagers are afraid of the lancets, while the Magistrate of Shajakanpur states that there is a general complaint that the lancets are not sharp enough to make proper incisions where the skin is hard. The results generally reported, however, are such that Government consider they justify further efforts being made to popularise the treatment. It is to be hoped that these will be made, for the application of the lancet and permanganate of potash is simple in the extreme, and the most ignorant person can use the method. It is interesting to note that in Burma the lancets were used with some success in cases of cattle bitten by snakes, and the civil veterinary department might report whether this kind of treatment is really efficacious.

"TRACHEAL PUSHING" IN ANEURYSM OF THE AORTA.

AT a meeting of the Société Médicale des Hôpitaux of Paris on Oct. 29th M. E. Hirtz showed a case in which the inverse of the well-known sign of aortic aneurysm—tracheal tugging—was present. The patient was a man in whom the trachea and larynx instead of being dragged down with each heart beat were, on the contrary, pushed upwards in sudden oscillations. Radioscopy revealed an aortic aneurysm but not its exact localisation. M. Hirtz thought that if it was situated in the concavity of the aortic arch it would have caused rhythmical depression of the left bronchus and therefore of the trachea and larynx (tracheal tugging). He believed that the aneurysm was situated at the convexity of the aortic arch. This inversion of the usual tracheal sign of aortic aneurysm does not appear to have been previously described.

THE INNERVATION OF THE SOFT PALATE.

THE nerves supplying the soft palate, and more especially those distributed to the muscles in that structure, have been the subject in the past of considerable controversy. It has, however, been established, especially by the researches of Beevor and Horsley in this country and of Professor L. Rethi in Vienna, that these muscles are supplied through the vagus nerve. Professor Rethi reviewed the whole question in a paper read before the recent International Congress at Budapest and published in the *Wiener Medizinische Wochenschrift* of Nov. 6th. It was for a long time supposed that paralysis of the soft palate was a symptom of certain forms of lesion of the facial nerve. Certain anatomists maintained that the motor fibres to the levator veli palatini came from the facial, since they succeeded in tracing fibres from the facial trunk through the geniculate ganglion into the great superficial petrosal nerve. Professor Rethi claims that these fibres are not motor in function, since stimulation of the facial trunk does not produce contraction of the muscles of the soft palate. As long ago as 1840 Volkmann, and shortly afterwards Hein, found independently that in freshly killed animals they obtained contraction of the levator veli palatini only on stimulating the vagus roots and not those of the facial. The observations of Beevor and Horsley on monkeys in 1888 established this fact, and Professor Rethi himself has confirmed it in a large series of observations on different animals. He has also found that the motor fibres for the levator leave the medulla in the median roots of the vagus, and that they originate in a common nucleus with the other fibres of these bundles. He has traced them down the lateral wall of the pharynx to the velum itself. These observations have been confirmed by Kreidl, and also by Chauveau in the horse. In man the same facts have been established. There have been cases in which the origin of the facial nerve has been destroyed without any paralysis of the soft palate, especially

in the interesting case described by Rosenthal, in which a new growth of the base of the skull extended into the Fallopian aqueduct and destroyed the great superficial petrosal nerve. On the other hand, numerous cases are on record where lesions of the vago-accessory fibres have been associated with paralysis of the soft palate. Professor Rethi has also investigated the secretory nerves of the soft palate. He has found in different animals, especially in cats, that local electrical stimulation produced secretion in the neighbourhood of the electrodes. Stimulation of the facial trunk at its entry into the internal auditory meatus produced secretion strictly limited to the same side of the soft palate. Secretion was also produced by stimulation of the cervical sympathetic. It was found that the secretion from stimulation of the facial nerve was more concentrated than that resulting from stimulation of the sympathetic, these results being the reverse of those obtained with the salivary glands. Professor Rethi was able to trace the secretory nerves from the facial trunk into the great superficial petrosal nerve and on into the Vidian, into which the sympathetic fibres also pass from the great deep petrosal nerve. The fibres thence pass together to the spheno-palatine ganglion and are distributed to the soft palate by the palatine nerves. He therefore concludes that the facial fibres going to the soft palate, which have by some been regarded as motor in function, are in reality secretory. His observations establish in an interesting and convincing manner the functions of the different nerves distributed to the soft palate, and make clear the innervation of the glands found in that structure.

PELLAGRA IN THE UNITED STATES.

THIS year's returns of the world's production of maize (*Zea mays*) show that more than 70 per cent. comes from the United States, which country produces at least 17 times more of this cereal than Austro-Hungary or Argentina, which are the nearest competitors. It has sometimes seemed strange to students of pellagra problems that the United States should be believed to be so free from this scourge, but it now appears that in many of the Southern States pellagra has been present for some years, though not correctly diagnosed till lately. On the American continent pellagra has been reported from Brazil, Uruguay, the Argentine Republic, and Mexico, but it was not until 1863 that sporadic cases were recognised in the New York and Massachusetts hospitals. But little more was heard of pellagra till 1902, when Dr. S. Sherwell and Dr. H. F. Harris each reported a case. In 1907 additional cases were brought to light, physicians visited Italy to confirm their impressions, and this year the public health reports, issued by the Treasury Department of the United States, give a table showing that about 1000 known cases of pellagra are scattered in 13 of the Southern States. More than half of these cases have been recorded from lunatic asylums or similar institutions. Dr. J. W. Babcock, superintendent of the State Hospital for the Insane, Columbia, South Carolina, was one of the earliest to recognise the existence of pellagra, and was one of those who visited Italy and England to confer with those acquainted with the disease and its complications. It is chiefly due to his energy that a "National Conference on Pellagra" took place in his hospital on Nov. 3rd and 4th. The conference was attended by 600 physicians from different parts of the United States, including official representatives from the Army, Navy, and Public Health and Marine Hospital Service. Many clinical cases were presented for study, and, in addition to some 40 papers read by American physicians, communications had been obtained from Dr. A. Marie (Paris), Dr. F. M. Sandwith (London), and Dr. J. Warnock (Cairo). Four resolutions were unanimously adopted by the conference, besides those which conveyed formal compliments.

3. That the purposes for which this conference was called can best be furthered by its formal organisation into a permanent association of national scope, and that the committee on permanent organisation be instructed to report at this session.

4. That this conference recognises the widespread existence of pellagra in the United States, and urges on the national Government the necessity of bringing its powerful resources to bear on the vital question of its cause, prevention, and control.

5. But while sound corn is in no way connected with pellagra, evidence of the relation between the use of spoiled corn and the prevalence of pellagra seems so apparent that we advise continued and systematic study of the subject, and in the meantime we commend to corn growers the great importance of fully maturing corn on the stalk before cutting same.

6. That the work of this conference be brought to the attention of the various state and territorial boards of health, and that they severally be urged to specially investigate the disease, particularly as regards its prevalence, and that they also see that the proper inspection of corn products sold in the various states be had.

The conference, on completing its labours, formed a permanent society to be known as "The National Association for the Study of Pellagra." Dr. Babcock was elected as first President, and the next meeting is to be held in June, 1910, in Peoria, Illinois, whence many cases of pellagra have been reported.

PROFESSOR ADAM POLITZER'S JUBILEE.

ON Dec. 9th Professor Politzer will celebrate the fiftieth anniversary of the attainment of his doctor's degree, and occasion will be taken of this jubilee to do honour to the great otologist. A festival has been arranged by the Austrian otological societies, at which a number of addresses will be presented by kindred societies in other countries. The University of Vienna will renew the professor's diploma and cause it to be presented by some of its leading members. It will be remembered that when Professor Politzer retired from the chair of otology at Vienna two years ago a similar festival was set on foot; this had to be abandoned at his express wish on account of a family bereavement. At that time a gold medal bearing his portrait was struck and presented by otologists from all parts of the world to the great teacher from whom so many had received their inspiration. The present occasion will be welcomed as an opportunity of giving expression to their homage in a more personal manner. For 46 years lecturer in the University of Vienna, Professor Politzer has exerted an immense influence upon the course taken by modern otology, an influence which derives its strength from its solid basis of anatomical and pathological research. His numerous contributions to the literature of the subject are well known to otologists, but the monumental "Text-book of Diseases of the Ear" has been recognised as a classic by the whole profession. Within the last two years he has published the "History of Otology," a work which represents an immense amount of literary research of the widest range. In spite of advancing years Professor Politzer retains the vigour of middle age, and there is every reason to hope that he will remain for many years the distinguished feature of international gatherings of otologists and the active leader of their branch of medicine. His British colleagues, many of whom have come under his personal influence at Vienna, welcome this opportunity of expressing their regard to a great teacher, and this expression will take official form in an address presented by the Otological Section of the Royal Society of Medicine, of which he is an honorary member.

AT the anniversary meeting of the Royal Society on Nov. 30th Professor J. Rose Bradford was re-elected secretary in conjunction with Sir Joseph Larmor. Amongst those elected to the council were Dr. W. H. Gaskell and Dr. C. J. Martin. Sir Archibald Geikie was re-elected president. The

annual dinner was held on the same evening at the Hôtel Metropole.

WE much regret to announce the death of Mr. Marcus Gunn, senior surgeon to the Royal Ophthalmic Hospital, Moorfields, and ophthalmic surgeon to the National Hospital for the Paralysed and Epileptic, Queen-square, W.C., which occurred at Hindhead on Monday last, Nov. 29th.

THE Bradshaw Lecture will be delivered at the Royal College of Surgeons of England by Mr. F. Richardson Cross, on Friday, Dec. 10th, at 5 P.M. The subject of the lecture will be: "The Brain Structures concerned in Vision, and the Visual Field."

THE King has been pleased to appoint Mr. A. J. Ram, K.C., a member of the Royal Commission on Vivisection, to be chairman of the Commission in the place of the late Viscount Selby.

THE Governor of Mauritius reported 38 cases of plague with 14 deaths during the week ending Nov. 25th. The Governor of Hong-Kong reported 1 fatal case of plague last week.

THE death is announced of Duke Karl Theodor of Bavaria, who has for many years practised as an oculist amongst the poor of his country.

THE MEDICAL PROFESSION AND THE POOR-LAW MEDICAL SERVICE.

BY MAJOR GREENWOOD, M.D., D.P.H., LL.D.,
HONORARY SECRETARY OF THE POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

OF all the changes that might arise from the carrying out of the recommendations of the late Royal Commission on the Poor-laws there is none more important or that has greater claim to the careful consideration of the medical profession of the country than the future development of the Poor-law Medical Service. While admitting that the medical treatment of the sick State poor cannot be regarded as affecting that service only, none the less it is the interests of its members that are more directly implicated, and they may fairly claim the sympathy of their professional brethren and assistance in maintaining their rights and in procuring the reforms which they consider necessary for the efficient carrying out of their public duties. When the proposals in respect of medical relief of the Commissioners were first published they came as a shock to most Poor-law medical officers. Although the medical machinery of the Poor-law had least come under popular condemnation, it was that service that was singled out for the most radical treatment. For many years Poor-law medical officers had been agitating for important reforms, the necessity of which was amply recognised by the Commissioners themselves; but instead of obtaining what they asked for, it was decided to revolutionise the whole service.

It is certain that the great majority of Poor-law medical officers dissent from the medical recommendations of all the Commissioners, and they do so in company with the only representative of the profession on that Commission, and the one that, above all the others, has the greatest knowledge of the practical working of the present system and of the chief needs of the sick State poor. It is to be hoped that the Poor-law Medical Service will receive the support of the medical profession generally, as it is very desirable that the public medical services of the country should not lack that assistance which they have every right to expect from their brethren. The great majority of Poor-law medical officers rely more on private practice than on their Poor-law appointments, and it is evident that their chief interests are identical with those of the ordinary practitioner. They may be relied on, therefore, to seek to minimise as far as possible the imminent danger to private practice generally among the poor that is threatened by any large scheme of Poor-law medical reform, carried out on the lines of either the Majority or Minority Report.

The Poor-law Medical Service consists of some 7000 medical practitioners, the great majority of whom are district medical officers. It is thus a very considerable service and has been in existence since 1834. It may be fairly described as one of the chief creations of what Sir William Harcourt styled "the great Poor-law settlement" of that year. At the present time, if open to some of the criticism of the Commissioners, it is practically attending to the wants and necessities of the sick State poor in every corner of England and Wales. Most of these district medical officers are part-time officers and in most cases dependent on their private practice, and this fact must not be lost sight of, for it is clear that an improvement in their official position would be dearly bought at the expense of their private practice. For that reason it is necessary for them in considering the various recommendations of the Commissioners to look beyond the mere betterment of their position as public officers. The Majority Report is favourable to them in one particular. It recognises the necessity of a Destitution Authority, whether known by that name or not. Without such an authority the relations between practitioners and their poorer patients throughout the country would be profoundly altered, and even if a considerable amount of the cost for attendance on improper applicants for State aid were recovered by means of the "Consistent Code" of the Minority it would not go into the pockets of the men, whose patients had been tempted away. But there is more than this: without a Destitution Authority there can be no Poor-law Medical Service at all.[1] Officers of the present service might be tacked on to the Sanitary Medical Service; but not possessing in many cases the D.P.H. diploma, they could hardly aspire to its highest honours, and as a Poor-law medical service their occupation would be gone. With regard to the medical scheme of the Majority, this need only be mentioned to be condemned; to no Poor-law medical officer would it be acceptable. It would tend to abolish his office and injure his private practice. The criticism of the Minority Commissioners is sound here, and the opinion of the only medical member of that Commission as to its merits quite conclusive. Neither Poor-law medical officers nor other practitioners desire to see an increase of contract practice of this kind, and the former do not believe that *bonâ fide* provident dispensaries can be grafted on to Poor-law institutions. The United County Medical Service of the Minority can only be attractive to those Poor-law medical officers who desire to be amalgamated with another service and to be whole-time officers, who consider their interest will be better served by retiring from private practice and becoming State officials. Speaking generally, it is certain that the majority of the Poor-law medical officers of the country do not desire anything of the kind. They are well aware of many of the defects in the service that have been brought to light by the Reports of the Commission, and would welcome their removal. But to remedy them they see no reason for the drastic changes that have been proposed both by the Majority and Minority. They regard the present medical service as a necessary and efficient department of the State, needing reform in details but not abolition.

The more important recommendations of the Majority, touching a change of authorities, might readily be adapted to the present medical service, and most of the existing officers would suffer no injury, but might hope for an improvement in their status and more adequate payment. The proposed enlargement of areas might require some redistribution

[1] In such an event the Poor-law Officers' Superannuation Act of 1896 would become abrogated. I do not in this article deal with the important considerations for the present Poor-law Medical Service that this would involve.

of the present districts, but in most cases the district medical officer would continue to work on the same lines as heretofore. The Sanitary and Poor-law Medical Services would be kept distinct, the one preventive and the other curative, except that there might be transferred to the former the institutional treatment of all notifiable infectious disease. But although separate, there might be much more co-ordination between these services than hitherto. Dr. A. H. Downes says in his memorandum to the Majority Report that provision for this already exists, and could be developed without difficulty. All this is in fair accord with the Majority Report, if the medical scheme be omitted, but so far as the needs of Poor-law medical officers are concerned it is immaterial what Destitution Authority is decided upon, provided it is not identical with the sanitary committee of the county authority.

The chief reforms sought by the Poor-law Medical Service are: (1) More adequate payment for their work; (2) better security of tenure; (3) better provision for the nursing of their outdoor State patients; (4) security for payment of midwifery and other special fees, as for operations and for the administration of anæsthetics; and (5) the provision of all medicines and medical and surgical requisites by the State. With reference to the proposal to make the medical practitioner into the relieving officer *quoad* applications for medical relief, while Poor-law medical officers would not object to a modification of the present system under special circumstances, where application to the relieving officer was impracticable, they could never approve it as a general practice. In their opinion they could not carry out the important public duties of the relieving officer efficiently, and the attempt would constantly cause friction between them and their professional brethren not holding Poor-law appointments. The latter, as it is, sometimes object to the order given to their patients whom they think able to pay, and this friction would be greatly aggravated if instead of the relieving officer it was a rival practitioner who officially interfered.

Poor-law medical officers object to a radical distinction between medical and other relief. Medical relief is not more necessary than other kinds of relief, and if it is good for the State that the indigent poor should receive medical attendance it is equally necessary that they should be properly fed and clothed. It is pure sentimentalism to draw a distinction between the application for medical assistance at the cost of the State and any other form of necessary relief. Both are equally pauperising, and their only justification is the real need of the applicant. That this need may be real and not counterfeit, it is most important that all applicants for State relief should be under the supervision of a special officer and that there should be no interference on the part of the medical man with his special duties.

The absolute necessity of keeping the Poor-law Medical Service as a separate entity was the point which I insisted upon in some remarks which by their courteous invitation I made recently to the Society of Medical Officers of Health. I may be excused for repeating my words here. The substance of the reforms that have hitherto been proposed must—I said—profoundly affect the position now held by Poor-law medical officers, and may not unlikely result, if carried out, in some modification of the offices held by the members of your service. At any rate our two services are the only public medical services that are likely to go into the melting pot, and for that reason it seems to us there is the utmost need that we should endeavour to come to an agreement, and take counsel together, as to what steps should be taken to defend our common interests. In saying this it must not be supposed that I forget that as public officers we only exist for the good of the nation, and that the national interest alone is, after all, the chief desideratum. But neither service is unmindful of this fact, and both consider the true interests of the respective services to be that they should be made as efficient as possible to do that public work which the exigencies of the national welfare require of us respectively. We of the Poor-law Medical Service have made up our minds that our extinction, threatened by the Majority and Minority Reports alike, is not good for the public welfare, and that a distinct Poor-law Medical Service, both indoor and outdoor, ought to be continued; therefore, we could not join in any attempt to support the Provident Dispensary Scheme of the Majority Commissioners. We emphatically deny that it would be a good thing either for the public or the poor, and we believe it would be ruinous in its effects on that portion of our common profession practising in poor districts. We further condemn the principle that every practitioner who wished should be a Poor-law medical officer, and we consider that there is scarcely any public medical service in the country that has better claims to be recognised as a distinct service than has the Poor-law. Granted the maintenance of our service, we are quite ready to welcome any suggestions which the Sanitary Service or the Society of Medical Officers of Health may formulate and to consult with them on common grounds to bring about all possible coöperation between the Sanitary and Poor-law Service of the country.

I think it not unlikely that from many points of view the proposals of the Minority Report may seem attractive to the Sanitary Medical Service. If the medical treatment of the sick State poor is to resolve itself into a mere question of sanitation, it is probable that the service whose special appanage sanitation is would, as Mrs. Webb phrases it, get all the "plums." But, on the other hand, the Minority Commissioners also propose to enrol the present Poor-law Medical Service in the ranks of the Sanitary Service, and Mrs. Webb has also plainly said that in the future the newcomers may expect to share in these "plums." There is, therefore, every prospect that posts now only open to professed sanitarians will, if the Minority scheme be carried out, be thrown open to a much larger circle. This, in my opinion, is not to the advantage of the present Sanitary Service. It must not be forgotten that even if a certain number of the present Poor-law medical officers are pensioned off, there will remain in round numbers about 3000 to find places in the new Sanitary Service, and all these under the scheme are to be allowed to compete for the plums in that service. To allow this to take place some modification would have to be made in the rights possessed by those who hold diplomas in public health. It has been suggested that present Poor-law medical officers who become partly health officers should not be debarred from the higher sanitary offices on account of the non-possession of that diploma. Whether such an arrangement would meet with the approbation of the medical officers of health of the country I do not know. It is, at least, questionable whether for the public good it is wise to mix up in one service clinicians and sanitarians; and especially, whether the science of public health would gain by such an admixture. On the other hand, as sanitary knowledge is necessary for the successful carrying on of all medical practice, if the Poor-law Medical Service of the future were kept distinct, as now, it might easily coöperate far more with the public sanitary service than it has hitherto done; and the true principle, in my opinion, to form the basis for future Poor-law reform is to try to get this coöperation while retaining a proper distinction between the clinician and the sanitarian. It seems to me that under any workable system the country must be divided into districts, and the actual treatment of the sick State poor must be in the hands of clinicians—that is, of district medical officers. An exception might be made in the case of infectious disease. The treatment, and every other detail connected with it, has naturally drifted into the hands of the Sanitary Service, as is only right and proper, and good reasons can be given why all forms of infectious disease may be safely treated at the public expense. But it is otherwise in the case of ordinary disease. If at times it may be difficult to draw the line, in most cases a broad line of demarcation can be drawn between the two kinds of disease.

I think, then, there should be a distinct service to deal with ordinary disease occurring among the sick State poor, and that the present Poor-law Medical Service, indoor and outdoor, or some modification of it, is the best fitted to do this public work.

THE PLUMBERS' COMPANY.—The Lord Mayor, in his capacity of Master of the Plumbers' Company, has signed the first batch of certificates awarded since his accession to office to plumbers (master and operative) of the suburbs of London upon their passing the examinations prescribed by the managing committee for the National Registration of Plumbers, and entitling the holders to describe themselves as registered plumbers, subject to their maintaining a satisfactory standard of work in the public interest.

SOME CONSIDERATIONS OF MEDICAL EDUCATION.

VI.[1]

The Position of the London Medical Student.

IN the foregoing chapters many of the difficulties have been expressed that exist in arranging a curriculum for the medical student, which will at the same time cover the many provinces of learning with which the medical student is supposed to be familiar, and also be a possible course of education for him to go through within a reasonable time. Various solutions of various problems have been discussed, problems now under the consideration of the General Medical Council, and in many of these it has been necessary to take into account the peculiar position of the London student.

The position of the London student need not, however, be described at any great length or with any abundance of detail here, because, firstly, it is such an old topic in our columns that we can with fairness take it for granted that all our regular readers are familiar with the points at issue; secondly, our medical and lay contemporaries have recently devoted great attention to the matter, and have published much valuable information for the assistance of those who want to make up their minds in a difficult situation; and thirdly, there is at the present moment a Royal Commission sitting to inquire into the working of the University since its reconstitution, and presumably the evidence given before that Commission will place all interested in full possession of the facts. We must, however, briefly retell the old story, begging our readers at the same time to remember the vital importance of the issues at stake.

The salient faults in the present system of medical education, which though called faults are nobody's particular fault, arise from a commingling two sets of circumstances, the ever increasing scope of medicine and the large and also increasing number of educational authorities able to bestow qualifications for practice upon their students, but not regarding the curriculum with the same eye. The two things can be talked of separately, but it is their simultaneous occurrence and vexatious interaction which cause the difficulty in London. The medical degree of the University of London has long enjoyed the highest prestige. If this degree is to be admittedly the hall-mark of advanced scientific medical education the Senate of the University must take pains to see that the examinations are of the sort that prove students to be to some extent familiar with the latest pathological developments. But if this is done at the expense of the more rudimentary parts of the curriculum the examinations become a string of academic acrostics, the students fly to coaches for assistance, and the General Medical Council may find the examinations, as it has already done on one occasion, unpractical. If it is attempted to meet the case by being thorough from the beginning, by insisting that all the students, after a satisfactory preliminary examination, and a searching inquiry into their preliminary and special scientific equipment, shall show such acquaintance with clinical work that they are ready to take the field on qualification as adequate practitioners, how is time to be found to instruct and examine these young gentlemen in electro-therapeutics, in blood pathology, in the psychological side of neurology, and so on? It is clear that all this cannot be learned in a curriculum of five years' duration, while it is probable that the social class from which the medical student is recruited can ill bear the cost of more than five years' studentship. These things being so, the simple way out of the dilemma would be, it seems, to insist that the curriculum should be devised with the idea of moulding the student into a practitioner, and that the more scientific developments should follow in accordance with the desire of the student to specialise in one direction more than another—to do laboratory work, or special consulting work, or operating work. But immediately the difficulty of the numerous centres which can confer upon the student the right of qualification makes itself felt. The universities, or certain of them, desire to maintain their degrees at a higher level than is thus signified, and it is right that they should do so, not only because every upward aim ought to be encouraged, but because they reward their students at the end of the course with a medical degree, conveying the legal right to the title of "Doctor"—not a small point as we all know. But what if Universities do not keep their examinations at any higher level than those of the corporations which reward their students only with diplomas, not conveying the legal right to the title of "Doctor"? This is a grave hardship to the students of the Royal Colleges, who have done work for their College tests which would have earned them at a university a medical degree, and the student in London, where the medical degree is particularly hard to obtain, is the typical sufferer.[2] What the public require are men to treat them and to heal them in the conditions and emergencies of sickness. There is something very wrong when a large number of men educated presumably towards this end cannot obtain the legal right to the title which in the public eye stands, or may stand, for the proper medical qualification. In London to obtain that title the student must do work that is not of the kind to enhance his utility as a practitioner; and further, this work may have been done in time which has been taken from ward work to such an extent that he may be unfitted for his clinical duties.

In the present state of affairs the universities and the corporations cannot be expected to view with similar approval the institution of a State degree in medicine, wherefore Parliament cannot be invited with any real vigour to sanction the introduction of measures with such an object, but some of the undoubted benefits that would be secured by a simplification of the educational curriculum could be created if our universities and the various corporations would work in unison under the existing educational scheme. In taking the London case for an example it must be remembered that the present plight of the London student may become the plight of the Dublin, Edinburgh, and Glasgow student at any moment, and already there are signs that in Dublin and Glasgow the rivalry between the universities and the corporations may have very unfortunate results for the licensing faculties.

Any understanding that might be come to between the University of London and the London medical schools is complicated by the number of medical centres in the metropolis. There are in London 12 medical schools—13, counting both the school for women and the school attached to St. George's Hospital, now to some extent merged in the King's College School of Medicine—and all these offer to teach the medical student everything that he requires from the start to the finish of the curriculum. Each school possesses, in addition to lecturers upon, and demonstrators of, anatomy and physiology, teachers of all the ancillary subjects, and each maintains the necessary class-rooms and laboratories for such an undertaking. 50 years ago, the scope of the medical student's education being what it was, a medical school attached to a metropolitan hospital could easily provide the necessary facilities for a student; and 25 or 30 years ago the separate schools were all working fairly satisfactorily, though the present conditions of unrest were clearly visible. But since 1880 the cost of medical education to those who provide it has been increased out of all proportion to any increase in fees demanded from the students, and this has had a disastrous effect upon the subdivision of effort prevalent in London. The developments of biology, physiology, bacteriology, chemistry, and electrical science have all conspired to involve in heavy expense any medical school seeking to be completely equipped. All the London medical schools have answered bravely to the demands made upon them, and it appears to be their intention to continue in the same gallant course; but they cannot go on if the supply of students fails them, for the income from fees is lost; while as long as the idea is abroad that the London medical student does not obtain his M.D. degree upon reasonable terms the shortage

[1] Nos. I., II., III., IV., and V. were published in THE LANCET of Oct. 23rd (p. 1232), 30th (p. 1301), Nov. 13th (p. 1459), 20th (p. 1531), and 27th, 1909 (p. 1616), respectively.

[2] See "Some Problems of Medical Education in London," an address delivered by Sir William Allchin on the opening of the medical session of Oct. 1st, 1907.

of students will occur. It is this shortage of students that keeps the matter of the consolidation of the London medical schools before the public mind. The number of medical students in Scotland appears to remain about the same as it has been for the last decade; quite recently the number of medical students in Ireland has begun to show an upward tendency; England is the only division of the United Kingdom where the number of students has perceptibly gone down, and it is in London that the decrease has occurred; and one reason certainly is that the University of London and the Royal Colleges have been unable to come to any joint arrangement by which a medical degree could be obtained upon reasonable terms by the diplomates of the colleges. This is a matter of moment to the English Royal Colleges, because it is from the London students that they draw much lucrative support, although they are as a matter of fact Imperial corporations.

The average London student must become an L.R.C.P. London, M.R.C.S. England, supposing that he is not satisfied with the Licence of the London Society of Apothecaries; the other support received by the Colleges is fortuitous although it is so large. Until the new great provincial universities were added to the Universities of Oxford, Cambridge, Durham, and Victoria, the mass of the English provincial students were compelled to take the London diplomas; now they need do so only if they like, for these new degree-granting institutions offer them the title of M.D., perhaps with no inconvenient and expensive change of residence. As yet the competition of the provincial universities may not be very severely felt by the Colleges; the double diploma of the English Colleges is still the termination to the recognised English medical curriculum. But this state of affairs may not last; at any moment the mass of average students may decide that they must obtain medical degrees upon reasonable terms somewhere, and the number of provincial universities may increase.

The Colleges are fully aware of the situation, and it is probable that the governing bodies recognise the fact that the only certain way to attract medical students to London again is to give them the same chance of obtaining a medical degree that they would enjoy if they lived in Liverpool or Newcastle. But this can only be done if the University of London will join in some scheme for the purpose. Many think that it would be facilitated if all the different London medical schools agreed to consolidate their purely scientific teaching, but this is a matter upon which there are strong differences of opinion. To support 12 centres in London for the instruction of students in chemistry, anatomy, and physiology, when the work could be better done from, say, three centres by properly paid teachers, must always seem extravagant, while it militates against a fusion of interests between all the London medical students, which would be a very valuable asset to the University of London.

It must not be supposed that the Royal Colleges have been apathetic under adverse circumstances. On the contrary, they have done much.[3] When the Colleges first became aware, mainly no doubt through teachers at the London medical schools, who were also members of the governing bodies of the Colleges, that unless the London students could obtain an M.D. degree more easily they would seek graduation elsewhere, their first idea was to obtain powers to grant such a degree themselves. The opposition, however, to giving to corporations the degree-granting powers similar to those possessed by universities proved too powerful for the success of any such scheme. At best it was a retrograde scheme, under which it was proposed to give to the London students, who already possessed a university which they did not use, the hall mark of a university without any other of the features of a university career. For the time the move would certainly have been popular, but no academic position would have accrued to the holders of such a "degree," and the Members and Licentiates of the Colleges would soon have found this out. The next course taken was to try to obtain from the University of London, the old University of London, some concession whereby the chances of the London students obtaining a medical degree should be increased. That these chances were very meagre was sufficiently proved by the fact that in the first 40 years of the existence of the University, though upwards of 2000 medical men became qualified yearly from medical schools where they might have graduated as M.B. Lond. if they had chosen, only some 800 men, or an annual average of 20 men, proceeded to the degree. The then unnecessarily elaborate demands of the matriculation examination of the University were held to be the chief reason for this dearth of medical graduates, though the "preliminary scientific" examination also came in for criticism as being based upon a syllabus that was unpractical in a medical curriculum. As might have been expected, the existing medical graduates of the University held strictly opposite views upon the propriety of altering the character of the tests. A large proportion of them having worked hard and made many sacrifices to obtain an honour degree were averse from any change being introduced into the curriculum so that others should obtain the degree upon easier terms. A smaller section did not consider that the University as a whole benefited by fencing its medical degrees round in such a stringent manner, believing that many of the demands made upon the time and memory of the candidates for the degrees were not in the least likely, even if they were met successfully, to help in the manufacture of a particularly sound practitioner. The strength of these two opposite views was enhanced by the unfortunate fact that each party could call the other self-interested. The holders of the medical degree who wished to have its face value maintained in any manner, however artificial, were certainly playing their own game; the medical graduates of the University, who were also important personages in the Colleges, might be regarded as no less certainly watching the case in behalf of their corporations or their schools. The University did not see its way to meet the Colleges, and the friends of the London medical students were constrained to fall back upon a third course. The existing University being unable to help them, and the privilege of giving degrees being denied to the corporations, the third alternative was a new university, of which the Colleges should in some way or other form the medical faculty. The scheme came near to realisation, and the "University of Westminster" received the support of the Privy Council, the ultimate authority on medical education, as being the body under which the General Medical Council exists. It, however, failed, there being no real impetus behind the movement at the critical moment.

Then came the reconstitution of the University of London, the most powerful factor in which was, perhaps, the feeling of the medical section that the education and examination of their students required revision and arrangement. In the new scheme the Senate of the University was given powers to make arrangements to conduct examinations conjointly with the Colleges, and undoubtedly the general feeling in the London schools was that some system of "pass" and "honour" degrees in medicine would be instituted, so that on the one hand the prestige attaching to a very stringent curriculum should be maintained, while a medical degree, as high in standard as far as purely professional attainments were concerned as any other degree in the country, would be made available for the generality of the London students. The Faculty of Medicine of the new University, including in its body many recognised teachers of the London medical schools, received a report from a committee which it had appointed to consider the reform of London medical education, advocating as an initial step the concentration of study in the preliminary scientific subjects as a way of bringing all the London students into touch with both the Colleges and the University. An appeal was made to the public by Lord Rosebery, the Chancellor of the University, and all the chief officers of the University, begging for the support of a Central Institute of Medical Sciences, and received in the first instance hearty support. The chairman or the treasurer of every London hospital concerned ranged himself on the side of the movement, which seemed to have secured a splendid start. Later, a small but very influential and business-like committee, appointed by King Edward's Hospital Fund for London, to make an inquiry into the allocation of the funds of these charities, appended to their report, which was necessarily based upon information in regard to the expenses of, and receipts from, the schools attached to the hospitals, a strong recommendation of the principle of the consolidation of medical study. But the movement so long expected, so definitely foreshadowed in the new constitution of the University, so

[3] In what follows the writer has availed himself freely of the writings of Sir William Allchin, whose well-known volume on the University of London is a mine of information on the whole subject.

happily inaugurated and so powerfully supported, came to nothing. The idea of one central institute was for various reasons replaced by a scheme for three centres which did not appeal to several of the London medical schools. The two largest schools—those of St. Bartholomew's Hospital and the London Hospital—were soon seen in definite opposition to it; gradually several other schools, possessing by no means the same sound reasons for desiring independence, were none the less found to be averse from the form of consolidation offered; and the Senate of the University resolved to return to the donors the £70,000 which had been collected for the Central Institute of Medical Sciences, and not to pursue any such scheme to realisation. The Senate could plead in defence of their action that £70,000 was not a large enough sum wherewith to build and endow the new Central Institute, and that the metropolitan medical schools no longer wished to see it founded, so that their position if accused of vacillation or retrogression is a strong one. But in the meantime the London medical student remains as far off as ever from an adjustment of his difficulties, and the shortage of medical students desiring to take the diplomas of the Colleges becomes more pronounced.

The English Colleges have, however, now taken, as our readers know, a most important step. In the autumn of 1908 delegates were appointed by the Colleges to consider a draft scheme which, if approved by the Colleges, might be submitted to the University of London with the object of establishing a system of joint examinations between the Colleges and the University, the action of the Colleges having its origin in the desire of the governing bodies to meet the difficulties which have just been described in detail as lying before the London students in their endeavour to graduate in medicine at their University. The responsibility of reporting on the situation was delegated to Sir Richard Douglas Powell, Sir Henry Morris, Sir William Allchin, Mr. Butlin, Dr. H. A. Caley, Sir W. Watson Cheyne, the late Mr. H. H. Clutton, Mr. R. J. Godlee, Mr. A. Pearce Gould, Dr. Edward Liveing, and Dr. Norman Moore. They made their report to their Colleges in December, 1908, which was duly approved and adopted by both corporations. The report, having pointed out that one statute of the University of London definitely permitted the Senate of the University to make arrangements with the Royal Colleges to conduct joint examinations in any part of the curriculum, went on to show that roughly one-half of the diplomates of the two Colleges are also graduates in medicine, proving that there is a general desire among those who intend to take university degrees, or who already possess them, to hold also the diplomas of the Royal Colleges.[1]

The report then points out how desirable it is that in London the system of teaching and examination should be coördinated in such a manner as to reduce the number of examinations. In London the same representatives of medicine, surgery, midwifery, anatomy, physiology, and other subjects teach and examine at the University and the Royal Colleges, while the organisation of medical education in London is largely controlled by the same individuals. But there are separate boards of examiners appointed by the University and by the Royal Colleges in all branches of study, as well as separate examinations—an obviously expensive position. In considering the scheme for reorganisation the delegates take as a basis the following principles:—

In considering such a scheme the delegates have taken as a basis of their deliberations the following principles: (*a*) That the University should retain all its existing rights as to the granting of degrees, but should consent to exercise them as regards Pass Degrees conjointly with the Royal Colleges so far as those students are concerned who shall have spent not less than four years in study at London Medical Schools and Hospitals and who shall have complied with such conditions as the University and the Royal Colleges may determine. It is assumed that the University will continue to grant, independently of the Royal Colleges, Degrees in Medicine and Surgery which might be called Honours Degrees. The views of those who maintain that the present Degrees of the University of London are of an Honours' standard would thus be met. (*b*) That the Royal Colleges should retain all their existing rights, to grant diplomas to those who (1) are not eligible under the foregoing conditions; or (2) do not desire to come under such conditions. It is thus assumed that the Royal Colleges will continue to admit to examination for their diplomas candidates from other universities, home, foreign, and colonial, as well as London medical students who are not students of the London University. (*c*) That the Royal Colleges should be associated with the University in conducting the Preliminary Scientific, Intermediate, and Final Examinations for the Pass Degree (M.B., B.S., M.D.).

[1] See THE LANCET, March 6th, 1909, p. 705.

The objects of these arrangements are, as the delegates point out, to secure facilities to the average London student to obtain a medical degree; systematisation of medical education in London with a reduction in the number of examinations and a greater use of the magnificent opportunities of clinical study afforded by the London hospitals; and lastly economy.

The scheme proposed in this report was communicated to the University of London by letter addressed to the Chancellor by the Presidents of the Colleges early this year, and no doubt will be duly considered by the Royal Commission, recently appointed to inquire into the reconstituted university and now sitting.

(To be continued.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE annual meeting of the Fellows and Members of the Royal College of Surgeons of England was held on Nov. 18th, Mr. BUTLIN, the President, being in the chair.

Some delay occurred in the commencement of the proceedings owing to the quorum of 30 required by the regulations not being present. When a quorum had been attained the PRESIDENT laid the report of the Council before the meeting and drew attention to several points contained in it. After remarking that 2652 copies of the report had been sent to Fellows and Members who had asked for it, he said that the final steps for the admission of women to the examinations for the diplomas of the College had just been completed. The next point concerned the proposed combination with the University of London. He said that the Senate had drawn up a scheme to permit of such a connexion, and the Council of the College had also formulated a scheme, but unfortunately differences, apparently irreconcilable, existed between the two schemes, and he felt somewhat pessimistic as to the probability of any such union taking place. However, a Royal Commission was at present sitting and it was possible that something might come of it. Remarking that the report of Dr. J. Ward Cousins, who was the representative of the College on the Central Midwives Board, would well repay perusal, the President gave a short sketch of the working of the Midwives Act since its passing in 1902 to the present time, and he lamented the lack of efficient provision for the payment of medical men called by midwives into difficult cases. He stated that there were many inconveniences in the Act, and that in July, 1906, Sir Henry Morris, who was then President of the College, had written to the Privy Council pointing out the desirability of making some provision for medical aid, and he had no doubt that before long an amending Act would be passed. During the year a number of valuable demonstrations had been given in the museum by Professor A. Keith, the conservator, and Professor Shattock, the pathological curator. These had been well attended and had been much appreciated and they had undoubtedly increased the utility of the museum. The establishment of these demonstrations had been mainly due to Mr. H. H. Clutton, whose loss they had all recently to deplore. He wished to draw particular attention to the section referring to the collection of odontological specimens, presented by the Odontological Section of the Royal Society of Medicine. The arrangement and the upkeep of this collection entailed a considerable expenditure both of money and labour, but its presence placed the museum of the College in the possession of what was probably the most valuable odontological collection in the world. As to the finance of the College, it might be said that it was satisfactory. He referred in detail to many of the items connected with the income and expenditure, and especially drew attention to the fact that by the successful sale of the examination buildings on the Victoria Embankment the loss on the original cost amounted only to £4000, and it must not be forgotten that the examination halls had been used for 22 years, and therefore as the lease was diminished to that extent the price obtained must be considered satisfactory. A large increase in the expenditure had been connected with the changes in the museum. The

chief change had been the re-issue of the catalogue of the museum; many years had elapsed since the previous edition had been prepared, and during that time the additions to the museum had been very numerous, and more than 12 volumes of additions had been issued. After much consideration the card form of catalogue had been recommended by the museum committee and adopted, and the arrangement which was now being carried into effect was that the catalogue should consist of two parts. In the first place, in the museum itself near the specimens were placed many little boxes containing card descriptions of the specimens; secondly, in the hall of the museum was a series of cards which served as an index to the specimens by which it was possible to find the situation in the museum of any specimen which a visitor wished to examine. For the purpose of this large hall catalogue four cabinets had been designed by Mr. E. C. Frere, A.R.I.B.A. Altogether the improvement in the museum resulting from the formation of a new catalogue would be very great. He formally presented the report to the meeting.

Dr. W. G. DICKINSON asked permission to put a few questions. He wished to know what was meant by the body corporate on page 9, where it was stated that the property of the College is not vested in the existing Members.—The PRESIDENT, in reply, stated that the body corporate consisted of the past, present, and future Fellows and Members.—Dr. DICKINSON further inquired if he was to understand that any scheme for a combination of the College with the University of London had fallen through.—The PRESIDENT stated that until the report of the Commission at present sitting was issued no certain answer could be given.—Dr. DICKINSON further inquired in reference to the statement that Mr. Golding-Bird had been appointed to succeed Dr. Ward Cousins as the representative of the College on the Central Midwives Board, whether Mr. Golding-Bird had ever attended a midwifery case since he was a student, and if not how he could be a suitable member of a board that had to judge of the fitness of women to act as midwives.—The PRESIDENT pointed out that the late representative of the College had not practised midwifery for many years and yet had acted as a most satisfactory representative of the College on the Midwives Board.

Mr. F. W. COLLINGWOOD asked if there was any chance of the Council allowing the Members to have some voice in the management of the College affairs.

The PRESIDENT said that the matter had often been discussed on the Council, but that it had not been found possible to devise any satisfactory arrangement.

The PRESIDENT then called upon Mr. JOSEPH SMITH to introduce the first resolution, which was as follows:—

That this twenty-fifth annual meeting of Fellows and Members again affirms the desirability of admitting Members to direct representation on the Council, which as now constituted does not represent the whole corporation, and that it does so in order that the constitution of the Council of the Royal College of Surgeons of England shall be in keeping with modern ideas of true representation.

He observed that as a resolution almost identical with the present had been carried on 24 previous occasions it was so familiar to all present that it was unnecessary for him to say anything in regard to it. The vast majority of the Members supported some such scheme of representation, and many enlightened Fellows were also on their side. The Members contributed a large sum of money to the exchequer of the College, and where, he asked, would the College be without its Members? The President of the College was not really the President of the College—he was merely the nominee of the Council who were the nominees of the Fellows. It was high time that such an old-fashioned state of things should come to an end.

The motion was seconded by Mr. COLLINGWOOD, who pointed out the great moral claim the Members had to representation on the Council. The presence of Members on the Council would aid the deliberations of that body. For instance, if Members had been on the Council the question of the association of the College with the University of London, difficult question though it was, would have been settled long ago.

Mr. A. N. WATTS stated that he became a Member in 1864, and from that time to the present he had never been asked to take part in any function connected with the College, except these annual meetings.

A MEMBER mentioned that the Council was not in touch with the Members, and when the Members met with difficulties in connexion with their rights as Members they could not obtain the assistance of the Council. He mentioned that during the last two years he had practically been debarred from giving evidence in one county court because the judge would not allow him to swear on his own New Testament, and would not admit his evidence unless he swore on the Testament provided by the court.

Mr. H. ELLIOT-BLAKE pointed out that the presence of Members on the Council would bring the Members more closely into touch with the Council.

Mr. EDMUND OWEN said that the present powers were vested by Charter in the Fellows and the Council and by right of that Charter they exercised it.

Mr. C. C. MITCHINSON mentioned that during the 50 years he had been a Member the College had done nothing for him.

Dr. WALTER SMITH said that a house divided against itself must be weak, and the addition of Members to the Council would add to the strength of it.

Mr. ELLIOT-BLAKE pointed out that in the Charter the consent of the Members had not been asked.

A MEMBER claimed that the Members of the College, though they had passed examinations more difficult than those leading to degrees in some of the universities, were under practical disabilities in courts of law, as their evidence was supposed to be inferior in value to that given by doctors of medicine.

A MEMBER said that such resolutions as this were merely like whipping a dying horse.

The motion when put to the meeting was carried *nemine contradicente*.

The second motion was brought forward by Dr. A. S. MORTON; it was as follows:—

That in fulfilment of the promise made by the President of the College in 1906 this meeting strongly urges the Council to impress upon the Government the necessity of amending the "Midwives Act" next session, in order that provision may be made to secure just remuneration for professional services rendered by medical men under this Act.

He commenced by observing that three years ago he withdrew a similar motion because the President assured him that the question of payment would be considered. In the country Members were liable to be called long distances to attend women in labour, knowing all the while that they would be unable to obtain any remuneration for their work. If the Council of the College had not supported the Midwives Act it could not have become law. The Government had the lowest idea of the value of the services of medical men; it paid for the examination of a man for the Woolwich arsenal the magnificent sum of sixpence; and Mr. Haldane's territorial scheme provided that for the examination of recruits, including the examination of the heart and lungs, the eyesight, the teeth, the presence of varicose veins, recording the colour of hair, and of many other particulars, the medical officer should receive a shilling.

The motion was seconded by Dr. W. H. DAY, who pointed out that medical men were always expected to work for nothing. Death certificates had to be given without fee, and yet the Registrar was authorised to receive for a mere copy of that death certificate 2*s.* 7*d.*, and now medical men were compelled to send notice of births also without charge.

A MEMBER said that the one important effect of the present arrangement was that now medical men only got the difficult midwifery cases, all the easier cases being attended by midwives.

Mr. COLLINGWOOD observed that the duties and responsibilities of the general practitioner were accumulating while the remuneration they were receiving was diminishing.

The PRESIDENT admitted fully the intense need that existed for a settlement of this difficult question, and he did not doubt that before long an amending Act would be passed, but the Government was never willing to pass an amending Act to an Act until some years had elapsed, so that the difficulties of the working of the Act should be fully ascertained before the amending Act was brought forward.

The resolution was carried unanimously.

The third motion was brought forward by Mr. ELLIOT-BLAKE; it was—

That the Council of the Royal College of Surgeons of England through their joint committee of delegates, and when it was found necessary and

in any agreement with the Royal College of Physicians of London, be asked to approve of and promote a new Charter and Act of Parliament to incorporate the Royal Colleges of Surgeons of England and Physicians of London, so as to form Royal Colleges or parts of the University of London.

He did not refer merely to the disabilities associated with the absence of the degree of Doctor of Medicine. His main argument was that the existence of such bodies as the Colleges was an anachronism, and that their existence should be merged in that of the University of London. They needed support of such a body as the University in the withered state of the College.

Mr. J. BRINDLEY JAMES seconded it.

Mr. COLLINGWOOD contrasted the arrangements in Edinburgh with those of London, and said that the present arrangements in London were utterly faulty, otherwise why should a town of only half a million inhabitants like Edinburgh have three times as many medical students as London, which had a population in itself twelve times as great.

Dr. DICKINSON would have liked some more information as to the number of University candidates who gained the diplomas of the College, and he was referred by the PRESIDENT to the report which contains the information for which he was asking.

The motion when put to the meeting was carried, with two dissentients.

A vote of thanks to the President for presiding was carried with acclamation.

Eleven Members of Council were present, five other Fellows, and 48 Members.

THE REPORT ON SCOTLAND OF THE ROYAL COMMISSION ON THE POOR-LAWS AND RELIEF OF DISTRESS.

THE Poor-law Commission in its report upon Scotland makes recommendations which follow the lines of those already published by it with regard to England and Wales, but which are necessarily modified and altered to suit the physical and economic conditions of the country to which they are to be applied. The existing Poor-law of Scotland, if it has grown up side by side with that of England, has owed its inception and development to different Acts of Parliament and to administrative regulations differing from those which have been found appropriate to its neighbour south of the Tweed. These have been framed to suit the temperament and habits of its people, which are not the same as those of the English, and it need hardly be said that within the limits comprised under the title Scotland are found wider variations of circumstance due to geographical and climatic features than are presented by England and Wales. Scotland contains cities such as Edinburgh and Glasgow, fertile lowlands and prosperous country towns, together with highlands and islands, in which throughout large tracts the inhabitants live lives of great poverty and hardship, and in which sometimes medical aid for the poorer classes may fairly be said scarcely to exist at all. To a large section of those who read this latest Blue-book issued by the Commission the chapters relating to the conditions of medical Poor-law service will appear to be the most interesting, and to point to a state of affairs more urgently crying out for reform than the system of outdoor or indoor relief of those not in need of medical aid. The interest referred to should be roused not only in medical men but in all laymen who have the welfare of the Empire at heart and who desire to see their fellow subjects within its boundaries accorded a fair chance of surviving to be healthy and useful citizens. The Commissioners quote from the evidence of the late Dr. Macdonald of Stornaway with regard to one of the islands words which apparently are not wholly inapplicable to other districts: "I have visited the greater part of our vast Empire, but have yet to visit any part thereof in which British philanthropy has failed to put medical assistance and hospital treatment within easy reach of the poor as in Lewis; nay, more, that same philanthropy has extended the same privileges to poor people beyond the bounds of our Empire, so much so that, were some globe-trotter to come across conditions similar to those prevailing in Lewis a Mansion House fund would be inaugurated for their relief. But here in Lewis, within 24 hours journey of London, men, women, and children are allowed to die without adequate provision being made to bring medical assistance and hospital treatment within easy reach of them, and under sanitary conditions that had better not be described."

If we dwell upon the recommendations made by the Commissioners for the amelioration of the conditions of medical service throughout Scotland rather than upon their views with regard to the relief of distress generally, and upon those relating to the modification of unemployment, we must first briefly indicate the changes which they wish to see in the administration of relief to the destitute, and in the agencies through which that relief, including medical aid, should in their opinion be distributed. With regard to the central authority, the Commission recommends that the Local Government Board of Scotland should assume a more direct position of initiative and guidance in matters of principle affecting the administration of the Poor-law or, as they propose to call it, Public Assistance. With a view to make this possible, suggestions follow for raising the status of the Board, for increasing the number of superintendents of the poor, for increasing the powers of the Board, for improving the system of audit, and otherwise for rendering the Board effective in stimulating and directing the administration of Public Assistance.

In the administration of relief the Commission finds the parish and not, as in England, the union of parishes the unit of administration in Scotland. Distinguishing burghs with a population of 7000 and upwards from counties exclusive of these, it recommends that the area of the burgh should be the administrative area in the former case and that of the county in the latter, with powers of combination and coöperation in both cases where necessary in order to provide special institutions for particular classes of poor persons. For burghs having a population over 7000 it is recommended that there should be a Public Assistance Authority appointed by the town council and composed as to one half of town councillors and as to one half of persons of experience in the administration of Public Assistance and other cognate work, the whole forming a statutory committee of the town council. Burgh Public Assistance committees are recommended for the purpose of carrying out the work in divisions of the burgh where the formation of such divisions is found necessary, the committees to be appointed by the Public Assistance Authority, and to consist partly of members of it and partly of members of voluntary aid committees where such are found. Since 1894, under the Local Government (Scotland) Act, parish councils have taken the place of parochial boards (instituted in 1845) for the distribution of parish relief, and the Commission recommends that in burghs having a population of less than 7000 these should be retained for the purpose of public assistance in such burghs and in landward (rural) districts, acting under a county Public Assistance Authority, composed on lines nearly the same as those recommended for England. It adds, however, that the parish councils should be supplemented by persons having experience to be appointed to them by the Public Assistance Authority.

It is recommended that a proportion of Public Assistance Authorities and of the committees should consist of women, and recommendations are made for the provision of officers to work under them and for improving the status and efficiency of these. The inspector of the poor is the officer chiefly dealt with, and it is mentioned that the only other Poor-law officer whose appointment is required by statute at the present time is the medical officer of a poorhouse.

The conditions of Poor-law relief in Scotland differ in many particulars from those found in England. The qualification for poor relief in Scotland is destitution—i.e., poverty, not absolute destitution, combined with disability to earn a livelihood; i.e., bodily or mental incapacity. No others may be relieved, not even the sick dependents of an able-bodied man, or a man in bad health who is nevertheless able to earn wages. The Commission recommends an extension of relief to the necessitous whom it defines. In Scotland, as regards the sane poor the term "indoor relief" is applied only to the maintenance of poor persons in a poorhouse, all relief in other institutions being regarded as outdoor relief. After discussing the defects of poorhouses, which in Scotland are more easily filled in burghs than in

country districts, and are open to many of the objections which apply to general workhouses, the Commission recommends that the general poorhouses should be abolished and that institutional assistance should be given in separate institutions appropriate to the various classes for whom it may be necessary. The essential difference between Scottish and English Poor-law administration lies in the prevalence of outdoor relief—a term applied to all not relieved in a poorhouse. Outdoor relief is thus considered to be given to children maintained out of the rates in charitable institutions, but apart from this the proportion of outdoor relief will be appreciated when it is stated that on May 15th, 1908, it was ascertained that out of the total number of paupers (excluding lunatics) 84·81 per cent. were in receipt of it. The Commission finds that it is often not administered wisely and that its unconditional character causes it to have little curative or restorative power. The effect of this feature of almost universal outdoor relief upon the conditions of Poor-law medical service need hardly be pointed out. With regard to the aged not suited for assistance at home, the Commission recommends special institutions, advising the extension of "parish homes," of which it describes instances in Scotland in terms of commendation. It finds the boarding-out of children to be well conducted in many places, but recommends that it should be more carefully regulated by the Local Government Board. It condemns their maintenance in poorhouses and gives instances to show that in Scotland this occurs under undesirable conditions. It also makes recommendations as to treatment by the Public Assistance Authority of unmarried women coming under it for the purpose of being delivered of illegitimate children in order that such treatment may tend to check immorality. For this purpose it points out the difference between those who become mothers for the first time and those who are mothers of illegitimate children already, and, again, those who are of weak intellect.

(To be continued.)

THE MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

AFTER a protracted debate the London County Council on Nov. 30th approved the further arrangements for the medical treatment of London school children submitted by the Education Committee and referred to in THE LANCET of Nov. 6th, p. 1367. The committee recommended the Council to enter into agreements with eight hospitals to provide treatment for 16,000 children suffering from ailments of the eyes, ears, and skin, and to accept the offer of the Charing Cross Hospital to provide X ray treatment for 25 children suffering from ringworm. The committee also reported without comment the receipt of a resolution passed by the British Medical Association at Belfast, protesting against the procedure contemplated by the London County Council as unsound in principle and unjust to the medical profession.

The debate, which lasted for three hours, took place on the report as a whole, but the following amendments appeared on the agenda paper. By Mr. Bray:—

That the waiting-room and other accommodation is to be satisfactory to the Council, and the hours of treatment such as to be convenient to working-class parents.

By the Rev. Stewart Headlam:—

That in view of the great distances which many thousands of children, especially from South London, will have to travel to the hospitals, the loss of time which the poorest parents will suffer owing to the long waiting in the out-patients' departments, and the difficulty of ensuring adequate treatment in such departments, which have so many other patients awaiting treatment, the Council directs the Education Committee to prepare a definite scheme for the establishment of school clinics, so that the children can be attended to in their own localities.

Mr. CYRIL JACKSON, chairman of the committee, in introducing the report, referred to the decision of the Council earlier in the year to treat through the hospitals certain of the ailments from which children suffer.[1] It was evident, he said, from the present report that they were able to deal with all the cases needing treatment in the existing institutions. With further proposals to come before the Council at a later date they would practically cover the whole of London. Only 5000 children still needed arrangements to be made for them under the present reference to the committee. True, there were one or two districts not served by the hospitals, notably Woolwich and Norwood, and there the committee was communicating with the local practitioners in the hope that suitable arrangements might be made. The Council owed a great deal to the education officer for the trouble he had taken. The negotiations with the hospitals were not easy owing to misunderstandings in the minds of the medical profession as to what the Council intended to do. Now this was better understood more and more hospitals were coming forward. Indeed, certain institutions had applied and had been refused because there were not enough children in their districts requiring treatment. Their services might be utilised later, but he did not think they would be required. He was certain the best method of dealing with the children was by the magnificent hospitals and their skilled staff. The Council would not be able to command the same class of men for clinics which it might establish.

The case against the committee's proposals was opened by Mr. BRAY, who entered into a detailed comparison of the cost of clinics and treatment in other institutions. He regarded the omission of dental treatment as very serious, and mentioned that only last week the Education Committee adjourned for another six months the consideration of this part of the question, notwithstanding that its attention had been called to it by various bodies. The military and naval authorities urged that the children's teeth might be attended to in order that recruits might be obtained more readily, and the medical profession warned them that many diseases originated in septic teeth. It would be possible to set up 12 clinics in convenient situations and treat every year 131,000 children at a cost of £20,000, or 24 clinics for £26,000. The cost per head would be not more than 4*s*. They were to pay the hospitals an average of 5*s*. a head, or 25 per cent. more than the sum for which they could do the work themselves. What value were they to get for the extra payment? The agreements to be entered into provided that the hours of attendance must be convenient to the hospitals, the additional clinical assistants would be appointed by the hospitals, and the Council would have no voice and no representation, and it agreed not to interfere in any way with the work of the department. Had the out-patient departments of the great hospitals been famous for their efficiency? Out-patients were treated in a way that would not be tolerated if the service were on other than a voluntary basis. He could not conceive that efficiency would result from handing their children over to these departments. The expense would be greater than the committee seemed to think. It might be said that the Council would save in the case of the hospitals which gave free treatment. But was it likely that these hospitals would continue to do so when they knew they could get help from the rates and a promise on the part of the Council not to interfere with the management? Already the London Hospital, which promised free treatment, had asked for a grant. The Education Committee also calculated that many children would be treated free by the hospitals as at present. That might be so if the Council established clinics, but did anyone imagine the hospitals would agree to receive school children in regard to some of whom they would receive 5*s*. a head and in regard to others nothing. They would refuse to treat any school children except under the ægis of the London County Council. The result would be that the Council would have to pay for the maximum number of children. Further, the cost to parents living remote from the hospitals in taking their children to the out-patient departments for treatment would be considerable. In necessitous cases this would have to be paid by the Council, and in all cases where the cost of treatment was sought to be recovered allowance would have to be made as between parents living near and those living far from hospitals. The scheme, then, could not fail to be extravagant.

Mr. JAY said that nothing like a reliable estimate of the cost of school clinics had been before the committee and therefore he did not take Mr. Bray's figures seriously. The cost as between the two proposals would not be appreciable. The committee had been able to tell the hospitals exactly how many cases would be sent to them and so they would be able to make precise arrangements for the dealing with them. No doubt the Council would have to pay fares in some cases and also make allowances towards the expenses of those living at a distance from the hospitals.

[1] THE LANCET, April 10th, 1909, p. 1069.

Mr. JEPHSON welcomed the scheme as far as it went. He believed a system of depending partly upon hospitals and partly upon clinics would be necessary, and that neither alone would solve the problem.

Mr. COHEN believed school clinics would be more expensive than was generally supposed.

The Rev. STEWART HEADLAM wished that the Finance Committee, which was responsible for the curtailment of the scheme by the omission of the treatment of teeth, could be brought to realise the result to London in one generation if in the schools the children's ailments, fraught with such serious consequences, were attended to. They would then be eager and enthusiastic to spend whatever money was necessary to make the coming generation healthy. This was essentially the work of the Gospels—fighting against disease and for health—and the call came to them all to perform it. Mr. Headlam reminded the Council that the special committee, consisting of medical men and other experts, appointed to consider this question reported in favour of clinics. The British Medical Association had expressed the same opinion.

The Rev. Dr. SCOTT LIDGETT remarked that the hospitals were doing this work on their own terms, whereas the Council should have had some control where public money was being spent. He feared that as the children were more stringently inspected and disease long unsuspected was revealed, the pressure on the hospitals would cause the proposed arrangements to break down. Whole districts were left out, and nothing was done to minimise the hardship to parents in having to sacrifice their day's work to take their children to the hospitals. He did not want to speak lightly of the out-patient departments, but in them young, inexperienced men would see the children. Clinics seemed at least as economical, and in them the Council could engage a staff of higher medical skill than would be provided for the children in the hospitals. ("Oh.") Did members suppose that distinguished heads of the hospital staffs would be at the disposal of the children? They must recognise that while general instruction was given by these authorities, the bulk of the work would be carried out by those who had the minimum qualification for operating upon their fellow creatures.

Mr. GRAY declared that a proposal to spend many thousands of pounds upon the establishment of clinics and the provision of treatment for teeth would be unpopular with the London electorate.

Mr. CYRIL JACKSON, replying to the various points raised in the debate, said that the hospitals were making arrangements in many cases for separate treatment of the children to be sent to them. The committee was still prosecuting inquiries on the subject of dental treatment, and the education officer had been to Cambridge to inquire into the working of the dental clinic there. The cost was 7*s.* 2*d.* a head and the percentage of children with carious teeth was 76 per cent. Until it had fuller details the committee thought the Council should deal only with the ailments arising more particularly in connexion with school work.

The amendments on being put to the vote were both lost, as was also a proposal by Dr. R. M. Beaton to instruct the committee to report forthwith as to the provision of dental treatment. The recommendations of the committee were then agreed to.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on Nov. 25th, Dr. F. H. CHAMPNEYS being in the chair.

Mr. E. PARKER YOUNG moved:—

That one member of the Central Midwives Board be elected as a Direct Representative by the registered medical practitioners in England and Wales in the same manner and at the same time as the Direct Representatives on the General Medical Council are elected.

He said that there were three Direct Representatives of the medical profession on the General Medical Council, and in the future there was going to be a fourth. In regard to the representatives on the Central Midwives Board the medical representatives were sent up to the Board through the examining bodies by a small number of persons. It was clear there was no direct representation on the Central Midwives Board, and if such representation was good for the General Medical Council surely it must be good for the Central Midwives Board.

Dr. S. B. ATKINSON, in seconding the motion, pointed out the advisability of the general practitioner voting at the same time for the General Medical Council and the Central Midwives Board.

The motion was put to the vote and carried.

A letter was received from the National Association of Midwives claiming to appoint a representative on the Board. The Board approved of the reply sent by the secretary stating that the Board had no power in the matter.

The Standing Committee reported that a letter had been received from the medical officer of health of Bolton as to the dismissal of a midwife from further attendance on a case by a registered medical practitioner who had been summoned on her advice. The committee recommended that the reply be that, on the facts stated, the Board considers: (*a*) That it would not have been right for the midwife to have disobeyed the instruction of the medical man, and to have kept on with the case until she had received notice from the local supervising authority. (*b*) That the medical man being responsible for the case, his orders, however ill considered, must be obeyed (Rule E, 6). (*c*) That as regards the question of suspension of the midwife to avoid spreading infection this was not necessary.

Miss R. PAGET protested against the recommendation because, in her opinion, it set up a precedent giving the right to medical men to send away midwives from their cases.

Sir GEORGE FORDHAM objected to the recommendation because he did not think it was necessary to lay down rules of conduct.

On the motion of Dr. ATKINSON the previous question was put and carried, and the subject dropped.

A letter was considered from Miss F. Bernard-Boyce, inspector of midwives for Norfolk, as to the extent of the right of a midwife to administer drugs. The Board decided that a reply be sent embodying the principles laid down in a circular letter to the examiners dated June 8th, 1907, on the subject of the administration of drugs by midwives, giving details as to the rules authorised for the proper administration of drugs by midwives under safeguards. In the course of the discussion on this matter Mr. GOLDING-BIRD stated that he did not consider that the term "administering a drug" meant prescribing one.

A letter was received from the honorary secretary of the Chelsea Division of the Metropolitan Counties Branch of the British Medical Association, forwarding a copy of a resolution passed at a meeting of the medical practitioners of Chelsea and Fulham, refusing to attend women in, or immediately after, childbirth, or in respect of puerperal maladies, in response to emergency calls by midwives, unless the boards of guardians of Chelsea and Fulham guarantee to pay the fee.

BRITISH MEDICAL BENEVOLENT FUND.

AT the November meeting of the committee of this Fund 27 cases were considered and grants amounting to £271 were made to 23 of the applicants, three cases being passed over as unsuitable for help and one case postponed for further inquiry. Appended is an abstract of the cases relieved:—

L.S.A., aged 65 years. Used to have a fair practice, but lost it through ill-health and other misfortunes and has had to start afresh in a neighbourhood where the fees are extremely small and the competition very severe. Is making progress, but requires a little help. Relieved once, £18. Voted £18 in 12 instalments.

Widow, aged 64 years, of M.R.C.S., L.S.A. Since husband's death, 24 years ago, has supported herself until recently, but now finds it very difficult to obtain work, and is not in very good health. Relieved once, £12. Voted £12 in 12 instalments.

Wife, aged 64 years, of M.R.C.S. Was deserted by her husband six years ago through no fault of her own and is now destitute and in very feeble health. No friends or children able to help. Relieved twice, £24. Voted £12 in 12 instalments.

L.R.C.P., L.R.C.S.I., aged 62 years. Practised for many years in the North of London, but lost all his patients through gradual failure of health and is now quite incapacitated. No children; no income and help given by friends during the last year is obliged to be withdrawn. Voted £18 in 12 instalments.

Daughter, aged 48 years, of late M.R.C.S., L.S.A. Was obliged to give up a good post as governess to nurse her mother during an illness which continued many years, and now needs a rest before again endeavouring to find employment. Income only a few shillings a week. Voted £5 in one sum

Daughters, aged 59 and 50 years, of late M.R.C.S. Since father's sudden death more than 30 years ago have endeavoured to support themselves by receiving paying guests at a small house of which they are the owners. Are obliged to ask help for the winter owing to the expenses arising from a severe accident to the elder applicant. Voted £10 in one sum.

Widow, aged 63 years, of M.R.C.S., L.S.A. Maintained herself as a nurse-companion for many years, but is now practically destitute. Receives a few shillings occasionally from a son recently made a bankrupt, and earns about a shilling a week by glove cleaning. Voted £12 in 12 instalments.

Widow, aged 68 years, of M.R.C.S., who practised in London, but was incapacitated owing to ill-health and supported for several years by the applicant. No income and dependent on a son-in-law who can ill afford to help. Voted £10 in two instalments.

Widow, aged 68 years, of L.R.C.P. Edin., M.R.C.S. Eng. No income; children unable to help; health failing. Relieved twice, £24. Voted £12 in 12 instalments.

Daughter, aged 58 years, of late M.D. Lond. No income; endeavours to support herself by letting lodgings and by needlework; eyesight defective. Relieved 26 times, £196. Voted £6 in six instalments.

Widow, aged 72 years, of M.D. Lond. Only income two small annuities and asks for a little help to obtain little comforts necessitated by her advanced age. Relieved four times, £26. Voted £5 in one sum.

Daughter, aged 55 years, of late M.D., L.S.A. Was a governess for many years, but is now in ill-health and quite unfitted to earn her living. Relieved eight times, £80. Voted £12 in 12 instalments.

Daughter, aged 53 years, of late M.D. Edin. No income; endeavours to support herself by taking lodgers, but has had a very bad season. Relieved twice £12. Voted £10 in one sum.

Widow, aged 55 years, of M.B. Cantab. Quite unprovided for at husband's sudden death about seven years ago and has since endeavoured to support herself by taking in washing and acting as charwoman. Has two daughters in domestic service and is advised by one of them in Australia to go out there with the youngest child, aged 9. Relieved six times, £77. Voted £5 temporarily and promised £12 towards passage money if friends find the balance.

Widow, aged 49 years, of L.S.A. Left quite destitute at husband's death from new growth a few years ago and dependent on a son, aged 17, earning 15s. a week. Health feeble; very deaf; has lost her sight in one eye and is nearly blind in the other. Relieved four times, £50. Voted £12 in 12 instalments.

Widow, aged 53 years, of L.F.P.S. Glasg. No income; slight help from elder children, but has three dependent on her, the youngest having spinal curvature. Relieved three times, £36. Voted £12 in 12 instalments.

Widow, aged 50 years, of L.S.A. Two daughters, aged 17 and 15. Has endeavoured to support herself and them by letting lodgings, but has been obliged to sell most of her furniture. Relieved twice, £20. Voted £12.

Daughters, aged 57 and 52 years, of late M.R.C.S. Small earnings from needlework and slight help from friends. Relieved five times, £56. Voted £18.

Widow, aged 75 years, of M.R.C.S. Has an Epsom College pension and receives a little help from a son, but has been obliged to incur heavy expenses for a daughter who has recently undergone a severe operation. Relieved seven times, £68. Voted £10.

Daughter, aged 62 years, of late M.R.C.S. Assisted her mother to keep a boarding-house for 13 years in order to support her father, who was paralysed, and now acts as housekeeper to two sisters who are endeavouring to establish a school. Relieved once, £12. Voted £12.

Daughter, aged 51 years, of late M.R.C.S. Nursed her father, who was a pensioner of this Fund and Epsom College, for 10 years, and now finds it very difficult to obtain sufficient work to support herself. Relieved once, £12. Voted £12.

L.R.C.P., L.R.C.S. Edin., aged 52 years. No income; has been incapacitated by spastic paralysis for several years. Relieved five times, £60. Voted £12.

Daughter, aged 49 years, of late M.R.C.S. Eng., L.R.C.P. Edin. No income and has recently undergone a severe abdominal operation. Relieved once, £12. Voted £12.

Contributions may be sent to the treasurer, Dr. Samuel West, 15, Wimpole-street, London, W.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Dec. 3rd, 1831.

Researches to establish the Truth of the Linnæan Doctrine of Animate Contagions, wherein the Origin, Causes, Mode of Diffusion, and Cure of Epidemic Diseases, Spasmodic Cholera, Dysentery, Plague, Small-pox, Hooping-Cough, Leprosy, &c. &c., are illustrated by Facts, from the Natural History of Mankind, of Animals, and of Vegetables, and from the Phenomena of the Atmosphere. By ADAM NEALE, M.D., &c. &c. 8vo, pp. 258. London: Longman and Co. 1831.

In the introduction to the present work, Dr. Neale informs us that "he has ventured to come forward as an advocate of the truth of the Linnæan doctrine of animate contagions, believing that it is founded on facts, and on the everlasting nature of things, and that by its development alone physicians will be at length directed to the true method of curing diseases." Proceeding with these views, it is singular with what *ingenuity* Dr. Neale has brought a multitude of curious facts in natural history to bear upon, and apparently corroborate, his favourite hypothesis. Everything that is obscure in the diffusion of epidemics, and in the cure of almost innumerable disorders, he lights up by the assistance of his insect coadjutors; and not content with this, he even directs their energy to the overthrow of some old and seemingly satisfactory doctrines which that arch deceiver "common sense" had applied to the explanation of various items in the history of disease. ..... For the entertainment of our readers, we shall quote a few of the anecdotes with which the volume abounds. Speaking of the plague, Dr. Neale states, p. 36:—

"Our knowledge of plague, after remaining for a long period in a very uncertain state, was destined to be augmented and rendered more accurate by the plague having been unluckily imported some years since (1831) into Malta, where it showed itself amongst the inhabitants first, and finally was communicated to some soldiers of the British garrison, then in Valetta."

"Sir A. B. Faulkner, then physician to the forces in the island of Malta, has published an account of this epidemical visitation. From his volume we select the following case, which occurred to Mr. Stafford, a regimental surgeon, who attended the man. Its date was the 10th of July, 1813, and the name of the sufferer was Robert Clark, aged about 24. Spare habit, lively disposition—had never been in hospital previously—had mounted guard this morning, after a minute naked inspection, when not a suspicious spot was to be seen on his body or extremities. His feet and hands had been carefully washed. About noon, Mr. S. says, I was sent for to visit him, he having been taken suddenly lame, while on sentry. On examining him, I found a small pimple in appearance, between the large and next toe of the right foot. The pain he declared to be excessive, and likened it to a burning coal. Whilst inspecting it, I could discover rising from it a red streak, which speedily ascended up the inside of the leg: and very soon after, a swelling took place in the inferior inguinal gland."

We need not quote the ensuing description of the disease, as it differs in no respect from ordinary plague cases. But the really interesting part of the narrative is as follows:—

"His description of the first attack was this:—that he was standing sentry on the top of the arch, through which was the only passage from the city of Valetta, into the country: that a pest-cart had that instant passed through heavily laden with dead bodies, from which proceeded a horrid smell: that the attack was instantaneous, as though he had been shot. I was instantly sent for, and was with him within three minutes, my quarters being near his post. My opinion (Mr. Stafford says) was, that from some defect in his shoe, some *pest dust* had got in, and was the true cause of his complaint. He had mounted guard at 7 o'clock in the morning, and had marched half a mile from his barrack to his post.

"Now, as Mr. Stafford does not inform us what that is which he calls pest dust, and as we know of nothing dead which could produce such an effect, I think we are *fully warranted in concluding* that this pimple on the foot had been caused *by the sting of something living*, and that this living substance was, in fact, *an insect of some sort*, which had escaped from the dead bodies contained in the pest cart, as it passed beneath the arch, and *which stung the sentry in the foot*, as just stated!!"

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 7648 births and 5167 deaths were registered during the week ending Nov. 27th. The annual rate of mortality in these towns, which had steadily increased in the four preceding weeks from 12·0 to 14·6 per 1000, further rose to 16·4 in the week under notice, and exceeded the rate recorded in any week since the middle of April last. During the first eight weeks of the current quarter the annual death-rate in these towns averaged 13·4 per 1000, and in London the mean rate during the same period was 13·2. The lowest annual rates of mortality recorded in the 76 towns last week were 8·2 in Reading, 8·6 in Bournemouth, 8·9 in Handsworth, and 9·9 in Barrow-in-Furness; the rates in the other towns ranged upwards, however, to 26·5 in Wigan, 27·3 in Hanley and in Merthyr Tydfil, and 29·2 in Swansea. In London the recorded death-rate last week was equal to 15·6 per 1000. The 5167 deaths registered in the 76 towns last week showed a further increase of 561 upon the numbers returned in the four preceding weeks, and included 278 which were referred to the principal epidemic diseases, against 261 and 281 in the two preceding weeks; of these 278 deaths, 61 resulted from whooping-cough, 58 from diphtheria, 55 from diarrhœa, 44 from measles, 41 from scarlet fever, and 19 from "fever" (principally enteric), but not one from small-pox. The annual death-rate from these epidemic diseases last week was equal to 0·9 per 1000, against 0·8 and 0·9 in the two previous weeks. No death from any of these epidemic diseases was registered last week in Cardiff, Gateshead, Brighton, Derby, Preston, or in eight other smaller towns;

the annual death-rates therefrom ranged upwards, however, to 2·3 in Rhondda and in Hanley, 3·2 in Swansea, 3·7 in Northampton, and 4·0 in Merthyr Tydfil. The deaths from whooping-cough in the 76 towns, which had been 31, 48, and 69 in the three preceding weeks, declined again to 61 last week; the highest annual rates from this disease during the week were 1·2 per 1000 in Aston Manor, 1·3 in Merthyr Tydfil, and 1·5 in Hastings. The 58 deaths referred to diphtheria showed a further increase upon recent weekly numbers, and included 20 in London and its suburban districts, 3 in Portsmouth, 4 in Manchester and Salford, 5 in Birmingham and King's Norton, and 2 each in Plymouth, Bristol, and Nottingham. The 55 deaths attributed to diarrhœa showed a further considerable decline from the numbers in recent weeks. The 44 fatal cases of measles were within one of the number in the previous week; the highest annual rates from this disease last week were 1·6 in Swansea, 2·3 in Hanley, and 2·7 in Northampton. The deaths from scarlet fever, which had been 44 and 28 in the two preceding weeks, rose again to 41 last week, and showed the greatest proportional fatality in Wigan and in Merthyr Tydfil; 11 fatal cases were recorded in London and its suburban districts, 6 in Manchester and Salford, and 4 in Sheffield. The 19 deaths referred to "fever" corresponded with the number in the previous week. The number of scarlet fever patients under treatment in the Metropolitan Asylums and London Fever Hospitals, which had declined during the six preceding weeks from 2810 to 2606, had further fallen to 2158 on Saturday last; 264 new cases of this disease were admitted to these hospitals during last week, against 284 and 308 in the two preceding weeks. The Metropolitan Asylums Hospitals contained 4 cases of small-pox on Saturday last. Of the 1442 deaths registered in London last week, 387 were referred to pneumonia and other diseases of the respiratory system, against numbers increasing from 167 to 283 in the six preceding weeks; these 387 deaths exceeded by 15 the corrected average number in the corresponding week of the five years 1904–08. The causes of 48, or 0·9 per cent., of the deaths registered last week in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death registered last week were duly certified in London, Leeds, Bristol, Newcastle-on-Tyne, Nottingham, Leicester, and in 44 smaller towns; the 48 uncertified causes of death in the 76 towns last week included 9 in Liverpool, 7 in Birmingham, and 3 in Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 849 births and 866 deaths were registered during the week ending Nov. 27th. The annual rate of mortality in these towns, which had steadily increased in the four preceding weeks from 12·9 to 19·8 per 1000, further rose to 24·2 in the week under notice. During the first eight weeks of the current quarter the annual death-rate in these Scotch towns averaged 15·7 per 1000, and exceeded by 2·3 the mean rate during the same period in the 76 largest English towns. The annual death-rates last week in these Scotch towns ranged from 11·5 and 13·4 in Greenock and Leith, to 18·8 in Edinburgh and 32·7 in Glasgow. The 866 deaths from all causes in the eight towns last week showed a further increase of 158 upon the numbers returned in the four preceding weeks, and included 98 which were referred to the principal epidemic diseases, against 66 and 77 in the two previous weeks. These 98 deaths were equal to an annual rate of 2·7 per 1000; the mean rate from the same diseases last week in the 76 English towns did not exceed 0·9 per 1000. The 98 deaths from these diseases in the Scotch towns last week included 49 from measles, 16 from diarrhœa, 13 from diphtheria, 9 from whooping-cough, 7 from scarlet fever, and 4 from "fever," but not one from small-pox. The fatal cases of measles which had been 24, 22, and 36 in the three preceding weeks, further rose last week to 49, of which 45 occurred in Glasgow and 4 in Edinburgh. The 16 deaths attributed to diarrhœa showed an increase of six upon the number in the previous week, and included 8 in Glasgow, 4 in Edinburgh, and 2 in Paisley. The 13 deaths referred to diphtheria exceeded the numbers in either of the two preceding weeks; 6 were recorded in Glasgow, 4 in Edinburgh, and 2 in Aberdeen. All the 9 fatal cases of whooping-cough and 5 of the 7 deaths from scarlet fever occurred in Glasgow. The 4 deaths referred to "fever" included 3 in Glasgow certified as enteric, and 1 from cerebro-spinal meningitis in Edinburgh. The deaths referred to diseases of the respiratory system in the eight towns, which had increased in the four preceding weeks from 68 to 195, further rose last week to 298, and exceeded by 165 the number registered in the corresponding week of last year. The causes of 28, or 3·2 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 76 English towns the proportion of uncertified causes of death last week did not exceed 0·9 per cent.

HEALTH OF IRISH TOWNS.

In 22 town districts of Ireland, having an estimated population of 1,142,308 persons, 563 births and 460 deaths were registered during the week ending Nov. 27th. The mean annual rate of mortality in these towns, which had steadily increased in the fiveprecedingweeks from 14·8 to 20·0 per 1000, further rose to 21·0 in the week under notice. During the first eight weeks of the current quarter the annual death-rate in these Irish towns averaged 17·4 per 1000, whereas the mean death-rate during the same period did not exceed 13·4 in the 76 largest English towns, and 15·7 in the eight principal Scotch towns. The annual death-rate last week was equal to 20·7 in Dublin (against 15·6 in London), 22·5 in Belfast, 26·0 in Cork, 13·3 in Londonderry, 16·4 in Limerick, and 25·3 in Waterford; the mean rate last week in the 16 smallest of the Irish town districts was equal to 18·9 per 1000. The 460 deaths from all causes in the 22 town districts last week showed a further increase of 21 upon the numbers returned in the five preceding weeks, and included 21 which were referred to the principal epidemic diseases, against 20 and 18 in the two previous weeks; these 21 deaths were equal to an annual rate of 1·0 per 1000; in the 76 English towns the mean rate from the same diseases last week was 0·9, and in the eight principal Scotch towns was 2·7 per 1000. The 21 deaths from these epidemic diseases in the Irish towns last week included 8 from whooping-cough, 6 from diarrhœa, 2 each from measles, scarlet fever, and enteric fever, and 1 from diphtheria, but not one from small-pox. The 8 fatal cases of whooping-cough exceeded by 2 the number in the previous week, and included 7 in Belfast. The 6 deaths attributed to diarrhœa, of which 3 occurred in Dublin, showed a further decline from the numbers in recent weeks. The 2 fatal cases of measles and 1 of the 2 deaths from scarlet fever occurred in Dublin. Of the 2 deaths from enteric fever, 1 each was returned in Dublin and in Cork. The deaths referred in the 22 towns to pneumonia and other diseases of the respiratory system, which had steadily increased in the five preceding weeks from 50 to 110, declined to 101 last week. The causes of 12, or 2·6 per cent., of the deaths registered in these Irish towns last week were not certified by a registered medical practitioner or by a coroner; in the 76 English towns the proportion of uncertified causes of death last week did not exceed 0·9 per cent., while in the eight Scotch towns it was 3·2 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointment is notified:—Staff-Surgeon F. F. Lobb to the *Victory*, additional, for disposal.

ROYAL ARMY MEDICAL CORPS.

Colonel F. B. Maclean has been appointed Principal Medical Officer, 7th (Meerut) Division, vice Colonel O. E. P. Lloyd, V.C., promoted Surgeon-General and appointed Principal Medical Officer, South Africa. Lieutenant-Colonel H. J. Fletcher will officiate as Principal Medical Officer, Abbottabad and Sialkot Brigades, vice Colonel Lyons, I.M.S.

INDIAN MEDICAL SERVICE.

The services of Captain C. C. C. Shaw have been replaced at the disposal of the Government of India. Major F. N. Windsor, chemical examiner and bacteriologist to the Government of Burma, has been permitted to return to duty

within the period of his leave. Captain A. D. White has been appointed as a specialist in advanced operative surgery, 8th (Lucknow) Division.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Supplementary List: The undermentioned to be Lieutenants (on probation): George Rollason (dated Oct. 25th, 1909) and John Fraser (dated Nov. 1st, 1909).

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd North Midland Field Ambulance: Lieutenant George J. S. Atkinson resigns his commission (dated Oct. 23rd, 1909).

Attached to Units other than Medical Units.—Captain James H. Hunter resigns his commission (dated Oct. 15th, 1909).

HONORARY SURGEON TO THE KING.

Surgeon-General William L. Gubbins, C.B., M.V.O., Deputy Director-General, Army Medical Service, has been appointed an Honorary Surgeon to the King, vice Brigade Surgeon-Lieutenant-Colonel and Brevet Colonel C. E. Harrison, C.V.O., retired.

THE SECUNDERABAD GARRISON.

The Secunderabad correspondent of the *Pioneer* of Oct. 29th states that "There left by Calcutta mail to-day Lieutenant-Colonel E. Butt, R.A.M.C., who has just vacated the senior medical officership of Secunderabad station hospital on promotion as P.M.O Calcutta Colonel Butt has only been a few months in Secunderabad, but in that time he has accomplished some remarkable improvements in sanitation and reduced to a minimum diseases which for years have been very prevalent in the garrison here. The garrison is, in fact, in a healthier condition than ever it has been before. Whereas the prevalence of enteric fever had baffled the skill of many of his clever predecessors, there have only been three cases since Colonel Butt's advent. The remarkable declination in disease is due to Colonel Butt's method of going to the root of sanitary evils, and although the troops were at first inclined to resent the rigorous measures adopted, all admit now that his methods have had a miraculous effect. Colonel Butt was the recipient of many farewell dinners, and his departure is much regretted."

THE ARMY AND NAVY MALE NURSES' COÖPERATION.

The second annual meeting of the Army and Navy Male Nurses' Coöperation, of which Her Majesty the Queen is patroness, was held at the Grafton Galleries, Piccadilly, on Nov. 29th, when Princess Louise, Duchess of Argyll, who was accompanied by the Duke of Argyll, was present. Sir William H. Allchin, in presenting the annual report, said that very satisfactory progress had been made during the year. The number of cases nursed was 300, being an increase of 108 over the previous year. The great progress that had been made was due in a large measure to the sympathetic attitude of the medical profession, and he hoped that the coöperation would soon be placed on a self-supporting basis. The Queen had shown her practical sympathy by sending a donation of £100. The War Office and the Admiralty had also greatly assisted the movement. The honour of founding the society belonged to Miss Ethel McCaul, aided by Sir Frederick Treves, and the coöperation of the heads of the medical departments of the navy and the army had enabled the committee to supply the public with suitable and reliable male nurses. The Duke of Argyll expressed the great interest which the Princess took in the work, and remarked on the necessity of preventing men who had obtained good nursing experience from drifting into the ranks of the unemployed. Colonel Sir Edward Ward, in the unavoidable absence of Sir Alfred Keogh, Director-General of the Army Medical Service, thanked Her Royal Highness for her interest in the work of male nurses, and said that Mr. Haldane and his colleagues at the War Office were deeply interested in the movement. Inspector-General J. Porter, the Director-General of the Medical Department of the Royal Navy, who followed, said that the nurses trained in the navy were second to none. He hoped that the coöperation would soon have three or four hundred nurses, who as reserve men would be able to help the country in time of need.

Correspondence.

"Audi alteram partem."

STATUS LYMPHATICUS.

To the Editor of THE LANCET.

SIR,—My services, as a medical expert witness, having been requisitioned by Messrs. McKenna and Co., solicitors for Messrs. Harrods, Limited, who were instructed to defend the case of Rex *v.* Clarke and Eardley *re* the sudden death of Miss Helenora Catherine Horn-Elphinstone Dalrymple while undergoing a dry shampoo with carbon tetrachloride on July 12th, 1909, and the case for the prosecution having now been withdrawn after a protracted hearing, for certain reasons to follow, I find myself prompted to write this letter for publication. The objects of such a prosecution are, of course, not a matter for me, and I only desire to deal with the case from a medical point of view. With regard to the danger of the use of carbon tetrachloride there can be no question about this or about the inadvisability of such "shampooing" being administered to any member of the public who likes to ask for it, but, in the particular case in point, had the defence been heard, I think it would have served to bring home a very important object-lesson to the medical profession—namely, that the status lymphaticus problem is a much more serious one than the majority suppose. It seems apparent to me and to others that the prosecution in furthering its objects lost sight of the all-important status lymphaticus factor. True, these desirable objects may have been attained and a warning note sounded to the hairdressing trade, but this has, in my opinion, only been accomplished by practically overlooking the "real" cause of death—namely, lymphatism.

Doubtless there are cases in which people have been convicted of very serious charges when, in fact, death was due to this disease, and a number of cases are on record where nursemaids or relatives have been charged with suffocating or fatally maltreating children, the true cause of death found at the necropsy being lymphatism. The presence post mortem of the typical pathological picture of the disease justly should be *primâ-facie* evidence of death from natural cases. In these days of deaths under anæsthetics the investigation of the disease is of the utmost importance, and I feel thoroughly convinced that if a Royal Commission should be appointed, as has been mooted, for the investigation of the subject, the status lymphaticus problem will be found to be one of the most important it will have to contend with. As it is, when one of these unfortunate tragedies occurs in the practice of a medical man with limited experience aspersions are sometimes cast on his professional capabilities, and probably an irreparable stain on his character results. For over three years now I have constantly given a great deal of thought to the subject. Very little is written or known about the disease, but on every possible occasion I have gathered all the information I could. Having personally met with six cases of sudden death from it in two and a half years, and in most of these instances having myself known and physically examined the subjects during life and made the post-mortem examinations after death, I have been able to draw certain deductions. I wrote a paper on the subject which was published in THE LANCET of Dec. 26th, 1908, and Jan. 9th, 1909, headed "Clinical and Post-mortem Observations on the Status Lymphaticus, with Deductions, and a Plea against the Maligning of Ethyl Chloride as a General Anæsthetic," and also another article to the *Journal of the Medico-Psychological Association* entitled "The Clinical and Post-mortem Aspects of the Status Lymphaticus," which was published in their quarterly journal of July, 1909. Notes, both before and after death, of all six cases are fully reported in these papers. The existence of the status lymphaticus undoubtedly in large measure accounts for the partial disrepute into which ethyl chloride has temporarily fallen, and its existence, too, has in certain circumstances brought ill-repute to a practice of such national importance as vaccination. I have known of such cases. For these reasons, also, it is a great pity that the status lymphaticus factor in "the fatal shampoo case" should not have been more fully discussed. I quite recognise the

raison d'être of the prosecution, but I cannot help thinking that on the all-important medical point above alluded to the evidence was misconceived, and this is one of the principal reasons which prompt me to write this letter; and here again I would like to emphasise the fact that it is to be construed in nowise controverting the undisputed toxicity of commercial carbon tetrachloride.

The question was, "What was, very roughly, likely to have been the actual volume of vapour given off and remaining in the cubicle at Messrs. Harrods at the time when Miss Dalrymple was being shampooed?" And this would depend mainly upon five factors—viz., (1) the area of evaporating surface; (2) the temperature of the room; (3) the velocity, direction, and area covered by the evaporating draught; (4) the size and position of the exits for escape of the vapour; and (5) the time during which evaporation was taking place. Professor Pepper stated in his evidence that "he thought death was due partly to the heart and partly to the respiration, partly by the carbon tetrachloride acting as a poison on the heart, and partly by its effect on respiration." From the latter half of this opinion my convictions compel me to dissent, and I mention the fact because there is no disease of greater medico-legal importance than the status lymphaticus. In the case in question there was reasonable evidence to show that Miss Dalrymple's life was extinct before she was laid on the floor. The sequence of events at the catastrophe and even the post-mortem facts, as recorded at the inquest, strongly support such a view. I do not believe that Miss Dalrymple could have breathed any carbon tetrachloride vapour, and when making such a definite statement I at least feel that I have substantial reasons for doing so. I would like it to be clearly understood, too, that my purpose in attempting to prove this, and that Miss Dalrymple's death was due entirely to lymphatism plus the effect of shock, is ostensibly for the sole object of drawing attention to this ill-understood disease instead of otherwise allowing it to received another set-back.

On Tuesday, Sept. 21st, I made certain experiments at Messrs. Harrods, Limited, in the room in which, I understand, Miss Dalrymple's death took place. In one experiment I requested that Miss Beatrice Clarke should have her hair dry-shampooed with tetrachloride in my presence, and that everything should be arranged and done exactly as it was in Miss Dalrymple's case. I particularly noticed the moment the vapour reached Miss Clarke's nose and mouth, and to achieve this end I kept my nose just in front of Miss Clarke's nose and mouth for the first four or five minutes, until the whole of *16* ounces of the carbon tetrachloride solution had been used, and the shampooing process practically completed. I was satisfied that I could detect no trace of tetrachloride vapour for the first three or four minutes at least, and that none could have reached Miss Clarke's face during this period—i.e., till the whole of the 16 ounces had been used—and I was prepared to state this fact on my sworn testimony. After this period, and if the door of the cubicle was closed, it was possible, and indeed most probable, that some of the vapour would reach the face of the person being shampooed (for quite explicable reasons), but this is entirely another matter. The ventilation of the actual cubicle was excellent. The fan used for the purpose of blowing the tetrachloride fumes away from the face of the person being shampooed was situate on her left side front, and the cylindrical tube, through which the blast of air was fired, was of about 3 inches in diameter, the nozzle of which would be approximately 3½ feet distant from the face of the person being operated upon and its direction in adjusted alignment with her head and the open door of the cubicle a few feet beyond. As the area covered by the current at 3½ feet forms a circle of just over a foot in diameter, and which circle coincides with the face, it is impossible to conceive how the vapour could fight its way in the teeth of such a gale, and get from the back of the head to the front of the face, not even from the hair just over the forehead, since in the shampooing position the latter is in a plane posterior to that of the nose and mouth. I understand that carbon tetrachloride was being used in numerous ladies' hairdressing establishments all over London, and in many instances where nothing like such elaborate precautions obtained.

On my interrogation of Miss Beatrice Clarke I elicited from her that the sequence of events at the tragic catastrophe, as she observed them, was as follows. The first thing that Miss Clarke noticed was Miss Dalrymple's hands falling limply from her face. This occurred approximately about one to two minutes only[1] after commencing to pour the solution on her hair, and when about 4 ounces only of the tetrachloride solution had been used. Miss Dalrymple was at the time holding a small towel over her forehead, and this of course, falling with her hands, disclosed the next thing which Miss Clarke noticed in the looking-glass opposite them both—namely, that Miss Dalrymple was looking very pale. Miss Dalrymple had previously looked rather pale, but her pallor was much increased. Miss Clarke states that almost immediately after this observation the pallor suddenly became extreme, and Miss Dalrymple's head and body at the same time fell forwards. Miss Clarke at once tried to steady her, but found that she was unable to do this owing to Miss Dalrymple's general and very marked limpness, and it was at this stage that Miss Clarke became alarmed. Being unable to prop her up, she laid her on the floor and ran out of the cubicle for assistance. Miss Clarke hurried back in a comparatively few seconds, and then noticed a dusky leaden blueness about the face, and Miss Clarke further volunteered that this peculiar blueness was more noticable at the back of the neck—Miss Dalrymple was at the time laid on her back. Miss Clarke neither saw nor heard any breathing movements, and did not notice whether the pupils of Miss Dalrymple's eyes were either large or small, nor does she know whether her eyes were light or dark. Miss Clarke states that prior to commencing the shampooing process she informed Miss Dalrymple that the fumes might make her feel a little faint.

Now, from such a sequence of events, and also from the post-mortem notes, as recorded at the inquest, I firmly contend that Miss Dalrymple was dead before her body was laid on the floor, and that she could not have breathed any carbon tetrachloride fumes. My reasons are the following. The first ominous signs were noticed approximately "one to two minutes" after commencing the shampoo process, when about "four ounces only" of the solution had been poured on the hair. Also, I understand, the door of the cubicle was open at the time, and in which circumstance the greater part of the vapour would be blown on and out of this doorway. The sequence of events indicates a "quasi-acute" case of lymphatism and one in which both cardiac and respiratory functions must have ceased practically simultaneously, and it does this: 1. Because of the great rapidity with which the ominous signs succeeded one another. 2. Because sudden and extreme pallor was the first and most striking feature of the fatal termination and not cyanosis—which would have indicated that the respiratory centre was being affected either before or to a greater extent than the cardiac centre; and it is in the first-mentioned condition—i.e., when both cardiac and respiratory centres are seized suddenly and simultaneously or when the cardiac centre is either affected first or to a greater extent than the respiratory centre—that death is so very sudden. 3. Because a blue discolouration became evident the moment Miss Dalrymple's body was laid on the floor, consequently it supervened very quickly and became more noticeable in the face when in the recumbent posture. 4. Because the "blueness" was a dusky-leaden blueness and more noticeable at the back of the neck, possibly from hypostasis. 5. Because of the extremely marked degree of flaccidity that very suddenly and very rapidly manifested itself. 6. Because no audible or visible respiratory gasps were noticed. 7. Because Miss Dalrymple's sudden death is perfectly comparable with three other quasi-acute cases of my own observation—reported fully in THE LANCET and *Journal of Mental Science*—in which death was equally sudden, the exciting causes equally insignificant, and in which the necropsy disclosed pathological changes such as are consistent with lymphatism and lymphatism only.

The post-mortem facts, as recorded at the inquest, indicate the same: 1. Because rigor mortis was chiefly present in the lower extremities, suggesting a sudden death in which the muscles of the legs, which had probably been most exercised just before the fatality, were being chiefly affected. 2. Because there was a livid discolouration of the face and head, indicating sudden death, and probably the same lividity that was becoming evidenced even while on the floor at Messrs. Harrods' hair-dressing department. 3. Because the heart cavities were dilated and the muscle degenerated, also because the arteries of the heart were very narrow,

[1] Depositions say, "Hardly two minutes, I should think."

indicating a well-marked or quasi-acute case of lymphatism, and one in which both respiratory and cardiac centres are usually affected suddenly and more or less synchronously, with the inevitable result, sudden death. 4. Because the kidneys were a little congested, to me another indication of a quasi-acute example of the status lymphaticus. 5. Because the lungs were congested—a point that I have commented on before in such cases of sudden death from lymphatism.

At the inquest no notes were recorded as to whether the glands in the mesentery were dark or pale pink in colour; whether they were uniformly large or uniformly small; whether there was or was not any general enlargement of the smaller peripheral mesenteric glands; and whether some groups of glands were larger and paler than others. Also the condition of the miliary lymphatics in the stomach, œsophagus, and intestines was not recorded. All these points might possibly have thrown further light on the case. The cavities of the heart presumably did not contain any noticeable quantity of blood, since no mention is made that they did, and I consequently surmise that it is not improbable that its action ceased during systole, as it usually does in such cases. In THE LANCET of Dec. 26th, 1908, I drew attention to the fact that of deaths occurring while under general anæsthetics from the status lymphaticus the catastrophes always happened during light anæsthesia, either before reaching, or on recovery from, the third stage of narcosis. In some instances where chloroform has been administered for an hour or more during a protracted operation, although no untoward symptoms may have been present at any time during the whole of the administration, nevertheless, just as the patient is beginning to come round and the last few skin sutures are being inserted he may suddenly die.

From this, and also in consideration of the extremely trivial firing-off causes that may be sufficient to give rise to a fulminating termination resulting in sudden death, I argue that the effects of shock in such cases are probably of more importance than the effect of the narcotic. In Miss Dalrymple's case, shock, caused by cognisance of the fear that she might feel faint, subsequently reinforced by the shock of the cold lotion applied to her head, would be, at a coincidently critical period, quite a potent enough exciting cause of sudden death. In conclusion, I was sorry that both Miss Dalrymple's former medical attendant and the coroner's jury should have attributed this sad and unfortunate disaster to "Death from misadventure," when surely the true verdict should have been one of "Death from natural causes."

Since writing the above I have read with great interest the letter of Dr. Donald J. Munro published in THE LANCET of Nov. 13th (p. 1468), and I would here like to take the opportunity of endorsing many of his views. For practical purposes the first point of paramount importance is the question of diagnosis, and in this connexion may I be allowed to suggest some modifications of Dr. Munro's restrictions of the term "status lymphaticus"? In my opinion the five following physical signs and symptoms are the most important and are arranged in order of merit. 1. Signs of a persistent thymus gland as evidenced by a lowering of the upper border of superficial cardiac dulness in the absence of emphysema of the lungs, or old tuberculous cavities at its bases, with or without fulness of the episternal notch, and *not by a dulness to percussion* behind the manubrium. This region may even be a little hyperresonant, and if dulness is present it is probably due to some new growth, and *not to a simple hyperplasia of the thymus gland*. 2. An uniform prominence of all the papillæ of the tongue, especially the circumvallate papillæ, between which and the epiglottis posteriorly there is frequently present a great multiplication, hypertrophy, and hyperplasia of all the lymphatic nodules, giving rise to a very characteristic picture, many of these sessile nodules measuring about 1-8th to 3-16ths of an inch in diameter at their bases; the condition cannot be seen without the aid of forehead and laryngoscopic mirrors. 3. A symmetrical enlargement of the thyroid gland. 4. Distant and muffled heart sounds, with absence of the sharply defined click caused by closure of the valves, associated with a soft, weak, and ill-sustained pulse, and, as Dr. Munro states, often abnormally slow and inexcitable. 5. A greater or less amount of hyperplasia of any or all of the faucial, pharyngeal, and lingual tonsils, also of the uvula, and the presence of adenoid growths in either very small or large quantities. Either or both the liver and spleen may, or may not, be enlarged, and to such a variable extent that no reliance can be placed on the absence of physical signs of enlargement, and very little indeed on the presence of the same. The pupils of the eyes also may appear rather dilated. The co-existence of 1 and 2 is pathognomonic of the disease.

Lastly, I cannot agree with Dr. Munro when he says, "No clinical observation has ever been so hopelessly mistaken as that which stated that pregnancy conferred immunity from the poisonous effects of chloroform." True, there are here more factors than one tending to produce an overdose of the vapour, but the anæsthetist is prepared for this. Despite the mechanical embarrassment to respiration, as Dr. Munro says, the heart is stronger than normal, and the increased carrying capacity of the red blood corpuscle I would regard as a "virtue" rather than a "vice." This factor, coupled with the toxæmia from over-metabolism, probably in large measure accounts for the reason that so little chloroform is necessary to produce and maintain an efficient *and safe* anæsthesia during parturition. Is it not sometimes advisable to artificially produce a toxæmia by giving a hypodermic injection of morphine preparatory to the administration of chloroform? Probably if one had to maintain surgical anæsthesia or the third stage of narcosis during parturition it would not be as safe as it would be apart from the condition, but surely "light" anæsthesia is much safer at such a time than it is at any other.

I am, Sir, yours faithfully,

R. ERNEST HUMPHRY, M.R.C.S. Eng.,
L.R.C.P. Lond.

Northwood, Middlesex, Nov. 15th, 1909.

CIVILISATION AND THE CORSET.

To the Editor of THE LANCET.

SIR,—May I correct an impression which Mr. Heather Bigg conveys in his communication on the above subject? He seems to think that men in "sultry and atonic countries"—I wonder what he means by an atonic country?—"gird the loins" with a view of supporting nature's "incompetent abdominal walls." Some years ago I unexpectedly met in Calcutta a very distinguished London surgeon, an old fellow-student, who was spending his summer holiday in going to India to personally see a thing of which he heard in connexion with native customs; if Mr. Bigg would follow that example he would see personally that "girding of the loins" has nothing whatever to do with artificial support. He need not go beyond Aden, where he will see the Arab camel-drivers coming in from the desert, among whom he will see magnificent specimens of activity. "Girding of the loins" really means girding of the loin cloth, which is wrapped round the body, passed through the legs, and tucked in *at the waist*, and is no more worn for the purpose of support than our trousers are so worn; nor, if it were conceivably the object, could it be obtained in any better degree than by our trousers. It is obvious that the cloth is liable to work loose, being only tucked in, and "girding of the loins" means readjusting it and tucking it in again, and the object corresponds to our object in wearing braces. Natives of India, whether fighting as uniformed Sepoys or in their native garb, Britishers, whether fighting or engaging in friendly contests, do not wear, and do not need, any artificial support. I do not wish to contend for or against the use of corsets, the women will settle that for themselves apart from contradictory statements and opinions of the profession, but I do wish to correct an impression which may mislead others in supposing that in a country like India—if Mr. Bigg calls that an atonic country, and a visit there will correct him on that point—men have to wear artificial support for their loins and abdomens. The impression might lead to the thought that it is necessary in this country, though not among those accustomed to, or knowing anything about, exercise. Fancy a Marathon runner running in an abdominal belt!

In conclusion, I may go one point further and say that which is demonstrable—namely, that where the natural muscular support of the loins and abdomen is deficient from want of tone, the best way of preventing recovery of tone is to provide artificial support, and in no cases is this so lamentably obvious as in the indiscriminate ordering of

supports for spinal cases, and I am constantly engaged in undoing the evil done in such cases, which evil admits of easy demonstration.—I am, Sir, yours faithfully,

H. E DEANE, Lieut.-Col., R.A.M.C. (retired).

Weymouth-street, W., Nov. 29th, 1909.

To the Editor of THE LANCET.

SIR,—I read with great interest an article in THE LANCET of Nov. 13th, entitled, "Civilisation in Relation to the Abdominal Viscera," which opens up a subject of wide and ever-increasing importance. During the last year I have made a careful observation of a large number of cases varying in age from 15 to 50 years, having regard to those conditions which are said to result from chronic intestinal stasis, and I am bound to confess the existence of those conditions is confirmed by systematic examination. In hospital work we are able more accurately to estimate the severity and chronicity of constipation, and I should like very briefly to repeat some of the points which have been recorded in your columns and which have struck me most forcibly.

The worn and haggard appearance, the absence of muscular tone, the pigmentation of the skin in definite places, and the peculiar odour of auto-intoxication are most characteristic. Pigmentation is an early symptom and this staining may be very marked at a time when signs of degeneration are only just beginning to appear. Most constant and remarkable are the changes in the breasts, which at first feel lumpy and later show cystic degeneration.

There is a point in connexion with this which arrests attention, and that is that this cystic degeneration does not take place in married women who are having habitual intercourse. A striking illustration of this presented itself to me a short time ago. A married woman, who had one child, 15 years old, was admitted, having received a slight injury to the right breast a few days before. The patient, who had for many years been subject to chronic constipation, showed extensive cystic changes in both breasts. On inquiry it transpired that she had had no intercourse with her husband for 14 years.

Pregnancy has a beneficial effect on constipation; the enlargement of the uterus so alters the mechanics of the abdomen that the bowel can more easily empty itself. Recently I had a typical instance of this. A woman, aged 39 years, was the mother of 14 children. She had been subject all her life to chronic constipation, except during her pregnancies when there was a daily evacuation and a consequent general improvement in health. The almost universal wasting that follows a long history of stasis is a prominent feature. Frequently these patients will say that up to the age of 19 or 20 they were stout, but that afterwards they gradually began to lose flesh until at the age of 35 to 40 they become very thin and wasted.

Enfeebled circulation with cold hands and cold feet is a source of great discomfort to the habitually constipated. Pain is always present, though it varies in position and severity and there are periodical remissions. These people are admitted into a hospital for various reasons. Loss of flesh, loss of appetite, indigestion, abdominal pain, vomiting, displacements of the uterus from loss of fat, sleeplessness, nervous depression are some of the numerous symptoms complained of. With painful monotony it is found that a long history of chronic constipation is given. They show some temporary improvement from treatment in bed, due in a slight measure to a daily purging, but chiefly to the assumption of the recumbent posture. It is surely not difficult to believe that a system whose resisting power is so lowered by auto-intoxication becomes an easy prey to the tubercle bacillus and other organisms.

These are some of the effects briefly enumerated which cannot fail to be noticed on methodical examination.

I am, Sir, yours faithfully,

Lewisham, Nov. 18th, 1909. H. M. M. WOODWARD.

THE JUBILEE OF THE DENTAL CHARTER

To the Editor of THE LANCET.

SIR,—The dental surgeons have shown themselves desirous of commemorating the Jubilee of their Charter, and the Royal College of Surgeons of England, as the first examining body to grant degrees in dental surgery, has endeavoured to show its interest in this branch of the profession, first, by accepting the trust of the Odontological Museum, which is now accommodated in a room adjacent to the Hunterian collection; and, secondly, by entertaining the leading members of the profession at a dinner within the precincts of the College. I would venture to suggest that this movement might well be directed towards a more permanent memorial of the Jubilee of the Dental Charter by establishing a research scholarship and demonstratorship in connexion with the Dental Museum. There are already two small endowed prizes, the Tomes and Cartwright prizes, administered by the College, the one awarded every third and the other every fifth year; but the dental profession is deserving of something of a much wider scope than these for the stimulation of research and for the higher teaching of its scientific branches. My own view favours a far more ambitious scheme than anything in the form of a mere prize, whether awarded after examination or conferred in recognition of original work completed. I would ask for the modest sum of £10,000 to endow a research and teaching demonstratorship in connection with the Dental Museum. In this way not only would a scientific worker be secured, but he would by his demonstrations attract the students from the various dental hospitals to study in the Dental Museum. Such a sum could, I am sure, be easily collected from among the dental surgeons alone; but if they were to impress upon their patients the necessity of endowing dental research there need be no hesitation in raising the sum I have suggested to £50,000, whereby not only research and teaching demonstratorships might be established, but travelling scholarships might be founded which would be of great advantage in keeping English dentistry in touch with that of foreign countries.

It is some 25 years ago since I first began to advocate the bringing of the dental surgeons back within the pale of the profession and giving them the same opportunities as ophthalmic, aural, and other specialists. One could scarcely have anticipated so encouraging a development as has occurred within so short a period. The dental surgeons have not been slow of late to seize the occasions for better recognition, and by placing the Odontological Society under the ægis of the Royal Society of Medicine, and by handing over their superb museum to the care of the Royal College of Surgeons they have shown their desire to be associated with the general body of the medical profession. Now I think the time has come for the further development of the scientific side of the branch, in which direction several members have already gained great eminence.

Should my suggestion find favour with the dental section of our profession, I should be pleased to coöperate with any interested in this project; but it must be distinctly understood that I write quite unofficially, though I have little doubt that the Council of the Royal College of Surgeons would give its consent to the administration of such a research demonstratorship as that proposed if the money were forthcoming for its endowment.

I am, Sir, yours faithfully,

London, W., Nov. 27th, 1909. R. CLEMENT LUCAS.

THE TREATMENT OF MORPHINISM.

To the Editor of THE LANCET.

SIR,—I have been much interested in the letters of Dr. C. J. Douglas and Dr. Oscar Jennings which have appeared in your columns under the above heading. The subject is in reality much larger than the heading might lead one to infer, for the treatment of morphinism is but a chapter in the volume on the treatment of habit, and accordingly the question raised in respect of one drug—the proper method of treatment of its abuse—is of fundamental importance and applicable in the main to all forms of drug abuse, if not to every form of acquired evil custom.

Dr. Douglas suppresses the habit, breaks its custom, by the help of hypnotic remedies; for him "*sleep* solves the problem of the painless withdrawal of morphine" ..... when the patient "awakes the painful period is passed and all desire for morphine is gone."[1]

Dr. Oscar Jennings also suppresses the habit, breaks its custom, but by the help of the patient's own good will, in arduous operation; his method stepping in to reinforce and encourage the operation of the will during the withdrawal of the drug, and, at the same time, to lessen the arduousness of

[1] THE LANCET, Oct. 2nd, 1909.

the will effort by various means which mitigate and make bearable the bodily sufferings.

The habit is thus suppressed in either case—Which is the better method? Treatment, the best treatment, is that which secures its end, *cito, tuto, et jucunde*, and if we use these criteria we must allow that the former method excels in the *cito* and *jucunde;* the patient is rid of his habit more quickly and more pleasantly, one should say less unpleasantly, for he sleeps it off. But how stands it as to the *tuto?* Which is the better man? Which will confront the future more safely—he who has worked out his own deliverance, helped, it is true, but taking his share of the pains and penalties of withdrawal, or he for whom all this was done *whilst he slept?* Surely there can be no question as to which of the two stands more securely? And does not the *tuto* outweigh by far the *cito* and the *jucunde?* From Dr. Douglas's letter of Nov. 27th we should conclude that the will is best conserved by lying dormant, which conclusion would present us with a new law of conservation and of growth!

Surely our task is to secure the conscious coöperation of the patient in his own cure, and to do this by so apportioning the magnitude of the task to the quantity of will-power available that it, the will, shall be able to operate. In this apportionment there will be ample scope for mitigants of all kinds, including drug sedatives, and this Dr. Jennings's method fully recognises. What says Hippocrates in his opening aphorism? "Oportet autem non modo seipsum exhibere quæ oportet facientem, *sed etiam aegrum* et praesentes et externa"—which injunction we take to mean that it is necessary, not only that the physician shall play his part in the cure, but further that he shall make to coöperate the patient, and the bystanders, and the external surroundings. I am, Sir, yours faithfully,

HARRINGTON SAINSBURY.

Wimpole-street, W., Nov. 29th, 1909.

To the Editor of THE LANCET.

SIR,—In his answer to my criticism Dr. C. J. Douglas has entirely misapprehended my views. He is quite mistaken in supposing my point to be that the will is better cultivated by a painful than by a painless cure, and in taking me to be the advocate of "long-drawn-out sufferings" in what he calls the painful withdrawal period. This is exactly the reverse of what I have always maintained, as I hold that there should not be a painful period at all and that renunciation should be effected without restraint, chemical or otherwise, because without any discomfort beyond what the patient is cheerfully willing to bear. In a morphia weaning there may be two varieties of distress: (*a*) craving proper, which really is unbearable but which is also quite preventable; and (*b*) different kinds of psycho-neurotic irritability, caused chiefly by want of self-restraint and aggravated tenfold by a wrong mentality. The first should be treated by the prevention of the factors of craving in their inception or their relief by suitable therapeutic measures. The importance of the second will be in inverse ratio to the patient's resolution and docility, and his reasonable confidence in the certainty of the ultimate result, all of which are, I think, lessened by a plan which minimises the necessity for self-mastery.

I quite agree with Dr. Douglas that weakness of mind and body may be caused by the prolonged wretchedness of a badly managed weaning. Nothing, indeed, can be more demoralising, but I have frequently pointed out how this can be prevented. The patient should, however, be led to control, rather than indulge, the morbid craving for relief by medicines, for it is, I believe, a mistake to suppose that the faculties of mind and body are always strengthened by such means.

The conquest of pain is undoubtedly one of the glories of modern medicine, but inasmuch as suffering in psycho-neurotics depends greatly on the mental attitude its suppression by drugs exclusively cannot but encourage exaggerated reliance on drugs and stimulants in moments of stress and difficulty. This is dangerous teaching. It is, I think (if the object in view is permanent recovery, and not merely temporary suppression), better to re-educate a drug-addict up to a healthier ideal, and to prove to him by enabling him to do without them that for the cure of drug disease further drugging is not indispensable.

I am, Sir, yours faithfully,

Nov. 29th, 1909. OSCAR JENNINGS.

THE INFLUENCE OF DIET ON THE THYROID GLAND.

To the Editor of THE LANCET.

SIR,—If I am not trespassing too much on your columns perhaps you will allow me once more to write on this subject in reply to Dr. Forsyth's letter in your issue of Nov. 27th.

In his letter Dr. Forsyth very definitely suggests to your readers that a whole host of investigators have made a special study of the direct influence of diet on the thyroid gland and that none of them have found the changes I have described. This statement is hardly in accordance with fact; on the contrary, it is so inaccurate and misleading that one must conclude that it was made unwittingly. I think I am right in saying that since I first drew attention to this subject in 1904, the only investigator who has published a lengthy series of observations is Dr. Forsyth himself. When he published his results in your columns in 1907 it appeared to me that in each of the directions in which he prosecuted his study he had overlooked an important fallacy, and that therefore the conclusions which he drew might be erroneous. I am now satisfied that such is the case. In the course of the past two years I have carried out in Professor Schäfer's laboratory in the University of Edinburgh a further investigation on this subject on an even larger scale than formerly, and the results of this amply confirm my earlier investigations. When the results of the investigation are published, which I hope will be shortly, I will deal in detail with the fallacies above referred to. I will also refer to the interesting results recorded by Dr. Edmunds. And if Dr. Forsyth will now justify his statement about "a whole host of investigators" I will look forward to incorporating in my paper a full reference to the results recorded by each observer. I am, Sir, yours faithfully,

Edinburgh, Nov. 27th, 1909. CHALMERS WATSON.

THE INFLUENCE OF MIND AS A THERAUPEUTIC AGENT.

To the Editor of THE LANCET.

SIR,—The position of Dr. Morison on this subject does not seem quite clear. In the first part of his letter he says that if a patient can be "restored to greater equanimity and good conduct, either with or without any such manœuvre" (as placing the hand on the pit of the stomach, &c.), no one could object. Later he speaks of hypnotism as "objectionable," and inquires if it can "be brought about without change in the mental organism"? Assuredly not. The experiments of Liébeault seem to demonstrate that a change does take place, and that this change is in the direction of diminished self-control, diminished will-power, and diminished reasoning powers, and thus in the direction of insanity. On the first attempt to hypnotise a patient (and I believe this is the experience of all hypnotisers) there is usually a resistance on his part which it takes some five or ten minutes to overcome. On the next and subsequent occasions this resisting power has ceased to exist, and the patient succumbs at once to the hypnotic influence. Some change has certainly taken place in the mental organism, a change indicating an enfeebled will, and tending, if not yet absolutely amounting to, a condition of induced insanity. Rational persuasion is one thing and hypnotic suggestion is another, but when the latter takes the form of inducing the patient to believe what sound reason tells him to be impossible, as that pain is non-existent, or that paraffin is a potation to be desired, it is no longer a case of reason or argument but simply one of induced insanity. Such is hypnotic suggestion. It is "the acceptance of a proposition in the absence of logically adequate grounds" through the mental influence of another. This is its essential feature, and why such action is not a criminal offence it passes the wit of man to conceive. If it is criminal to destroy human life, it must be tenfold more to destroy reason, for I have never yet seen a human being who would not rather part with life than reason. If this fact were fully recognised hypnotism would surely be condemned by all right-thinking persons both in the medical profession and out of it. It is the more execrable in that it is only the feeble-minded who are subject to its influence.

These are surely no less deserving of our protection than the feeble in body. To take advantage of the feebleness of intellect of one already on the borderland of insanity to annihilate by hypnotic suggestion the little remnant of reason and will-power that remains to him is equivalent to destroying a feeble, defenceless, or injured life. The gift of reason and free-will is our most cherished possession, and I maintain that we have no more right to deprive a human being of this gift for the sake of supposed ulterior advantages than we have to destroy human life for the supposed benefit of the human race.—I am, Sir, yours faithfully,

Royal Avenue, S.W., Nov. 22nd, 1909. J. FOSTER PALMER.

A STATE DEGREE IN MEDICINE: ONE PORTAL TO THE PROFESSION.

To the Editor of THE LANCET.

SIR,—In your report of the speeches at the Lord Mayor's Day dinner at the Apothecaries' Hall you say the "Senior Warden advocated the establishment of a State University of Medicine as the single method of entering the profession, but Sir Douglas Powell pointed out that a one-faculty university was a contradiction of terms." On this point I would suggest that if a charter were granted to a State university with teaching powers (where advantageous) it certainly would not remain long with one faculty.

I cannot but think that the plan put forward by the two Royal Colleges has very little chance of success. They can scarcely hope for the assistance of either the Faculty or the Senate of the London University and must therefore rely upon the Royal Commission recommending Parliament to compel the Senate to make such alterations in the University examinations as may coincide with the views of the authorities of the two Royal Colleges. The only alternative suggested by the Colleges is the possibility of combining with some other existing university. I cannot look upon this alternative as one to be desired and naturally think that my suggestion, with perhaps some slight modification, would be a much preferable alternative and a more feasible scheme to be put before the Royal Commission.

I am, Sir, yours faithfully,

Leyfields Wood, Ashampstead, Nov. 24th, 1909. A. T. NORTON.

ON RADIUM IN THE TREATMENT OF CANCER.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Nov. 13th Mr. Butlin gives some cases of cancer treated by radium, in which the condition of the blood is not alluded to. It would have been of the greatest interest if we could have had a record of the condition of both the red and white cells before treatment, while local improvement was going on, and afterwards when the ulcerations had broken out afresh. The cases are not of the kind in which one would expect very marked blood change, but it might have been sufficiently noticeable to make it appear at least possible that, had injections of iron and arsenic been given at the same time, results might have been better.

When we know the effect on the blood in cases of cancer treated by X rays or radium, and if it turn out, as seems likely, that the improvement is entirely local, the blood not being materially affected, we may by judicious combination of X rays or radium and injections of iron and arsenic cure a greater number of cases than is at present possible by means of one or other line of treatment. Personally, I should be very grateful to anyone who can supply me with any information as to the result on the blood in cases of cancer treated by radium or X rays.—I am, Sir, yours faithfully,

London, W., Nov. 25th, 1909. SKENE KEITH.

THE TREATMENT OF CHRONIC ULCER OF THE LEG.

To the Editor of THE LANCET.

SIR,—Among the various treatments suggested for this condition I see no mention of the simplest and, in my experience, by far the most effective—i.e., by exposure to the air. For some years I have treated all my cases in this way, and have obtained far quicker and more lasting healing than by any other method. In winter the rest of the limb must be kept warm and in summer the wound must be protected from flies by a cradle covered with gauze. I have also found the same treatment most effective for burns of limited area and lacerated wounds which refuse to heal.

I am, Sir, yours faithfully,

Uckfield, Sussex, Nov. 22nd, 1909. E. H. SWEET.

MALARIAL FEVERS IN INDIA.

REPORT ON THE CONFERENCE APPOINTED BY THE GOVERNMENT OF INDIA.

(FROM A SPECIAL CORRESPONDENT.)

(Concluded from p. 1549.)

Conclusions and Recommendations.

THE conference concluded its sittings at Simla on Monday, Oct. 18th. The conclusions and recommendations have been drawn up under the following main headings: 1. Scientific investigation. 2. The agency by which investigations should be made. 3. Practical measures: (*a*) extirpation of mosquitoes; (*b*) quinine treatment and prophylaxis; (*c*) education; and (*d*) finance.

The following is a summary of the details under the first heading (scientific investigations). It is recommended that arrangements should be made for the immediate systematic investigation of (1) distribution of malaria; (2) (*a*) its epidemiology and endemiology, including relation to meteorological and physiographical conditions, and (*b*) the life history of malaria-bearing mosquitoes; and (3) the physiological and therapeutical action of quinine and other remedies for malaria. It is recommended that vital statistics should in future be compiled by smaller units than at present to prevent the true distribution of malaria being obscured, and that tests of registration work should be introduced in selected areas conducted by a special staff, carefully supervised. Special attention should be directed to non-endemic areas to ascertain the reasons for such immunity.

As to the investigation agency (2), it is recommended that a local organisation should be established in each province to work in consultation with the central scientific committee to be appointed by the Government of India to direct and coördinate investigations. An annual meeting of the central committee and a delegate from each organisation to be held at a convenient centre to review the work done and prepare a programme for future work.

The practical measures (3) are divided into four sections. The first relates to the extirpation of the anopheles mosquitoes, as to which continuous investigations are recommended to ascertain how this can best be done at a cost not prohibitive. Among the measures for the extirpation of mosquitoes the conference make recommendations as to (1) drainage, including the restriction of wet cultivation in the vicinity of towns, if likely to breed mosquitoes; (2) oiling with petroleum of small collections of water which contain the larvæ of anopheles mosquitoes and cannot be filled up; and (3) introduction of fish into collections of water if inquiry shows that this will check the breeding of anopheles mosquitoes. The second subsection adopts the conclusion of a subcommittee formed of members of the conference which recommended that quinine should be given in the form of sulphate or hydrochloride for adults and in a palatable form for children. Quinine should be available in tablets of five grains each, which is the proper prophylactic dose for adults. The agency for quinine distribution should, in addition to postmasters, include all grades of officials. Special efforts should be made to induce private vendors to engage in the business and a liberal commission allowed. The educated classes should be invited to organise means for spreading a knowledge of quinine among the lower classes. As further measures to disseminate knowledge, moveable camps, itinerant dispensaries, leaflets and advertisements, especially in the vernacular press, and instruction in all grades of schools are proposed. The free distribution of quinine as a prophylactic is recommended only in cases of severe epidemics (with exceptions left to the discretion of local governments) and in the case of school children in malarial tracts during the malaria season.

On the suggestion of Sir H. Risley it is proposed that a committee of officials and non-officials to be chosen by

elected members of the new councils should be formed to spread knowledge regarding malaria and proposed preventive measures among the people. Under (*c*) (education) it is recommended that text-books for schools should include lessons in malaria and hygiene. Divisional and district committees and local societies should be organised similar to the league started in the Gurdaspur district of the Punjab. The sanitary department should be organised with reference to the suppression of malaria as well as to general sanitation. As to financial considerations (*d*) each local government is invited to make an annual assignment for malaria investigation and preventive measures, which have also a strong claim on all increases and surpluses of revenue. Municipalities and local boards are also urged to set apart funds for the prevention of malaria.

TOWN PLANNING AND THE SANITARY HISTORY OF DWELLINGS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

PROPOSED BRITISH ADAPTATION OF THE PARIS "CASIER SANITAIRE," OR HEALTH RECORD OF EVERY DWELLING.—THE RESULTS OF 11 YEARS' EXPERIENCE.—TUBERCULOUS HOUSES AND CANCER HOUSES.

ONE of the clauses in the Town Planning Bill provides as follows:—

> It shall be the duty of every local authority within the meaning of Part II. of the principal Act to cause to be made from time to time inspection of their district, with a view to ascertain whether any dwelling house therein is in a state so dangerous or injurious to health as to be unfit for human habitation, and for that purpose it shall be the duty of the local authority and of every officer of the local authority to comply with such regulations and to keep such records as may be prescribed by the Board.

This is in imitation or adaptation of what is known as the *Casier Sanitaire des Maisons*, which constitutes one of the most thorough and useful methods of sanitary control established in Paris. In 1894 the first attempts to get something like a sanitary record of houses in Paris had so far advanced that the results commenced to be recorded. On August 13th, 1898, p. 424, we published a lengthy account of the endeavour made by the Bordeaux authorities to imitate the example of Paris. By that time a full sanitary history had been drawn up of 2000 out of the 36,000 houses that then constituted the town of Bordeaux. How the investigations were made, the results recorded and rendered available for prompt reference, we described at the time. To-day in regard to Paris not only can the system be explained but it has been in full working order for a sufficient number of years to be able to form some idea of its usefulness. It is no longer the history of insanitary districts but of the entire capital, and the history of the most healthy quarters is only second in importance to that of the worst slums. But for the record kept concerning the best property we should have no standard by which to judge the extent of the evil wrought by the worst property. According to the census taken in 1901 there were in Paris 77,149 houses. To-day the *Bureau Administratif des Services d'Hygiène de la Ville de Paris* possesses, if set down in round figures, the sanitary history of 80,000 houses, showing that all the older and nearly all the recently constructed dwellings have been duly inspected and their history noted down.

How is all this done? The service as established in Paris now works with the greatest ease, promptitude, and regularity. The sanitary history of every house is written up to date, can be found in a moment, and is never more than two days old. When a death is recorded, a contagious disease reported, a disinfection ordered, the notification of this fact, in passing from one service to another, takes 24 hours to reach the bureau of the *casier sanitaire*. Another 24 hours may be allowed as the utmost limit of time before the fact is entered into the *casier* of the house in question. There are as many *casiers* as there are houses. A *casier* consists of a stiff piece of imitation parchment which serves as the wrapper of a small portfolio. It is white, and on the outside is written the name of the street, number of the house and of the *arrondissement*, and name of the *quartier* or sub-district. On the inner side of this wrapper, painted red, is a small ground plan of the house. Within are kept five different-coloured printed forms with blank spaces for the details to be written in, and these are identical for all the houses. The first, a white sheet, contains a general description of the house. There are the measurements—namely, the length of the façade, the depth and the superficial area. We are then told where the entrance doors are situated and whether the house is built in one solid block or has wings. This includes the very important question of inner courts, their number and superficial measurements, and how they are paved. Now a line is drawn across the sheet, and the second division thus made deals with the means provided for getting rid of the slop or waste water. The questions put relate to the number and situation of the sinks, whether they give on to open or covered drains, and where is the ultimate outfall. A third division asks for details as to the soil pipes and which of the prevailing systems is applied:—the cesspool, the moveable pail or tub, the dividing apparatus that retains the solids and lets the liquids flow into the sewer, or the more recent *tout à l'égout* system allowing everything to drain direct into the sewer. After that it is necessary to state how many closets there are, whether private or shared by different tenants, and how many soil pipes. The fourth division is for all that relates to the water-supply. The last and fifth division gives the number of rooms on each floor, on which side their windows are placed, whether looking out on to the street or a court, and whether there are any shops or workshops or cellars. Finally, the number of inhabitants and the date of the last inspection are noted down.

The next printed form is on yellow paper, the quarantine colour, and is entitled Disinfection. It is subdivided into a number of vertical columns. The first of these is broad enough to inscribe dates. Then there are 10 columns, each with the initial letter of a transmissible disease. These are typhoid, measles, scarlet fever, diphtheria, small-pox, whooping-cough, cholera, tuberculosis, erysipelas and puerperal fever. Then comes a dividing line and another series of 10 columns under the general heading of "other diseases." Here are cancer, pneumonia, dysentery, and various diseases for which disinfection, though sometimes desirable, is not generally practised. Whenever a disinfection is carried out the date and cause are entered on this yellow sheet. Thus it is possible to tell at a glance how often it has been thought necessary to disinfect in the dwelling and for what diseases. The next sheet of paper is of a light green colour, and is divided into similar vertical columns, and with the same rapid facility the deaths, the date, and cause of those deaths are seen. The fourth paper is light blue, and has for title "Unwholesome Dwellings." The first line gives the date when notification was received that the house was believed to be in an insanitary or unwholesome condition. Then comes the date of the report on the dwelling drawn up after investigation by the "Commission on Insalubrious Dwellings," and the third line gives the date of the prefectorial ordinance issued in consequence of this report. After this follows a description of the alterations and improvements that have been ordered by the prefect. Lower down is space for the list of fines or other sentences pronounced, if any, against the owner or other person responsible for carrying out the improvements in case of failure to obey the instructions. Finally, there is a place to inscribe the date when the works ordered were satisfactorily terminated. Thus on this light blue sheet we have the record of all sanitary works, alterations, or repairs. Finally, there is a dark blue sheet printed on both sides and containing a large number of questions which have to be answered when the inquiry is held as to the sanitary condition of the house.

Such investigations have now been made for every house, though, of course, at different dates, and conditions may alter after the inspections. On the other hand, the inspections can be renewed from time to time, and the inspectors now know from the *casier sanitaire* the general character and the past history of the house they may be called upon to re-inspect. All these documents are kept in a surprisingly small space. A room of moderate size suffices to hold them. It is divided up in rows of shelves, like book-cases. Instead of books there are cardboard portfolios of the same size but varying thickness, one portfolio for each street, or section of a street if it be a very lengthy thoroughfare, and inside, in numerical order, are the *casiers* of each separate house. The portfolios are placed in alphabetical order. Though there are now 80,000 separate *casiers* corresponding to each of the 80,000 houses of Paris, it does not take longer to pick out

any one particular *casier* than it does to find a word in a dictionary. Every day all the deaths that occur are at once added to the history of the houses in which they take place; so also with regard to the disinfections practised and all the other details mentioned above. A few clerks are employed to do this work punctually and promptly. But not only is the history of each house kept well up to date, methods have now been introduced of analysing the results of the immense amount of information received. Thus we have not only the sanitary history of each individual house but also of each street or group of dwellings. In this way the healthy and unhealthy quarters are marked out with great accuracy; and this not merely in the general sense but also in respect to various diseases taken by themselves.

Before, however, dealing with these general results, the question naturally arises as to how far the *casier sanitaire* can be of use to any individual member of the community. Obviously anyone about to take up his abode in a house, to lease or purchase a part or the whole of a house, would very much like to know whether the premises were noted favourably or unfavourably in the municipal records. On the other hand, if all the information now collected was made public private interests would be compromised. Doubtless many speculators in slum property richly deserve the public pillory. Nevertheless, if everybody could look into the *casier sanitaire* of any house there are persons who would make malicious use of information thus obtained, to say nothing of giving unnecessary trouble to the employees in charge of the *casiers*. Thus as a rule the only person who can ask to see the *casier* of a house is the owner or person legally responsible for the property. Therefore an incoming tenant has not the right to go to the Hôtel de Ville and ask to see the *casier sanitaire* of the house in which he proposes to live. On the other hand, before signing a lease or purchase deeds a condition can be made that the owner shall allow the person with whom he is negotiating to examine the *casier sanitaire* of the property in question. It would be a very useful help to the progress of sanitary reform if all tenants insisted on seeing the *casier sanitaire* before they signed leases or purchased property. But it is to be feared that this could not be done just where it is most needed—that is, in regard to the poorest property where many of the tenants are only weekly tenants.

The result of the house-to-house inspection, rendered necessary to fill in the *casier sanitaire* of every dwelling, has been the execution of an enormous amount of sanitary work. During five years ending on Dec. 31st, 1908, no less than 19,400 houses visited were noted as requiring more or less important repairs or alterations. As a rule the house-owners were well disposed and willing to carry out the instructions given them. Only in 693 cases was it necessary to commence legal proceedings, and of these but 148 were brought before the Council of the Prefecture. It is noted that the recalcitrant proprietors are among the most wealthy owners of extensive property; the smaller owners are much more ready to carry out instructions though involving considerable expenditure. These alterations and improvements, however, only affect matters of detail—a better soil-pipe, a ventilator here, an extra window there—whereas what, in many cases, is needed is the total demolition of dwellings that are so built that they can never be healthy. But the collection of information, in so complete and systematic a manner, enables the authorities to point out at once which are the worst spots. Further, and to supplement the information, the Paris Municipal Council in 1908 decided that anti-tuberculosis dispensaries, and other institutions of this sort, should only receive subventions if they supplied in a uniform manner very detailed information concerning their patients. Thus the connexion between certain quarters and certain occupations and the prevalence of tuberculosis is being clearly established. There are also figures showing the comparative susceptibility of the Paris-born population and those who have migrated to the capital.

During a period of 11 years (1894–1905) there have been 138,766 deaths due to transmissible diseases in 50,394 houses. Of these deaths 101,496 were caused by tuberculosis and they occurred in 39,477 houses. Analysing these figures, the authorities note that there were 23,124 houses where the only deaths from transmissible diseases were due to tuberculosis. The 39,477 houses in which 101,496 deaths from tuberculosis have occurred are ivided into three classes or categories. In the first class are the houses where less than five deaths from tuberculosis have been recorded during the 11 years. There are 34,214 such houses, and the total of deaths from tuberculosis occurring in them was 63,487, or an average of a little less than 2 deaths per house in 11 years. The second class are houses where there have been, from this cause and during this period, at least 5 deaths and not more than 9 deaths. There are 4443 such houses and 26,509 deaths occurred in them. The third class are the houses where the number of deaths amounted to 10 or more. There are 820 such dwellings, and in them 11,500 deaths from tuberculosis took place during the 11 years. Taking the last figure, it will be seen that 10 per cent. of the total number of deaths from tuberculosis occurred in 820 houses—that is, in the forty-eighth part of the houses affected, and the hundredth part of the total number of houses in Paris. But a house is a vague term, and it is above all necessary to know how many people dwell in these houses. The official reports drawn up by the Department of the Municipal Administration, which has the management of the *casier sanitaire*, give us this information. M. P. Juillerat, the chief of this department, presents each year an admirably prepared report to the Prefect of the Seine.

The second and third class of houses, as defined above, comprise together 5263 houses, and they had a total population of 426,676 inhabitants. Of this number, 38,009 died from tuberculosis during the 11 years, which is equal to 89·31 per 1000, or an average annual mortality of 8·119 per 1000. The average annual mortality from tuberculosis in Paris, as a whole, is very high. During the 11 years in question it amounted to an annual average of 4·95 per 1000 of the population. But it will be seen that in the second and third categories of houses just mentioned it was much above the average. If, however, we take the figures for the 820 houses of the third and worst class the discrepancy is still greater. These houses had 106,300 inhabitants and 11,500 of them died from tuberculosis during the 11 years, which is equal to 108·181 per 1000 in the 11 years, or 9·834 per 1000 per annum. The houses of the second class with average annual mortality from tuberculosis of 7·52 per 1000 have an average population of 71 inhabitants in each house; while the houses of the third class, with average annual mortality of 9·834 per 1000, have an average population of 130 persons per house. There is a further significant distinction to be made. Of the 820 houses of the third class, 195 consist of cheap furnished rooms, while the rest are let to people who possess their own furniture. These latter 625 houses had 92,670 inhabitants, and the annual average death-rate from tuberculosis was 8·44 per 1000. The remaining 195 houses, consisting of cheap hotels or furnished rooms, had 13,630 inhabitants, and during the 11 years their average annual death-rate from tuberculosis amounted to 12·20 per 1000! This is indeed an appalling figure, all the more so as it is quite evident that it results from the sort of dwelling in which these unfortunate people live and die prematurely. These tuberculous houses, as they may well be called, are rarely isolated, but stand in groups in narrow streets and are lofty, with but very small backyards. Equally instructive is the calculation made in the opposite sense. Paris, with a total population of 2,660,559, had, as already mentioned, an average mortality from tuberculosis during the 11 years of 4·95 per 1000. But, if we deduct from this total population the 426,676 inhabitants of the two worst classes of dwellings, the death-rate among the remaining 2,233,882 would only amount to 2·56 per 1000 per annum.

It may be said, however, that the moral to be derived from these figures is already well known, though it has rarely been illustrated on so large a scale. But the *casier sanitaire* supplies the means of making other sorts of investigations on problems that have not yet been elucidated. Thus, for instance, a suspicion has gained ground that there are such things as cancer houses. Now, in Paris, this can be tested on a sufficiently large scale to be able to arrive at some conclusion. With 80,000 houses and a population of more than two and a half millions under close and daily observation, some general deductions should be possible. A special method of registering has now been established in regard to cancer. When a death occurs from this cause, it is not only entered in the *casier sanitaire* of the house where it has taken place, but also on a stiff card similar to those used for library catalogues. These cards are white and are placed in the usual long, narrow drawer; but when it happens that a second

death from cancer takes place in the same house then a red card is substituted for the white one. Thus the prevalence of red shows the proportion of houses where more than one death from cancer has been notified. This service was commenced in August, 1906, and up to Dec. 31st, 1908, the deaths from cancer registered in this manner amounted to 6980. One death from cancer took place in each of 5786 houses, and of these 922 houses were qualified as tuberculous houses—that is to say, they belonged to the second or the third class, according to the classification described above. Two deaths from cancer are noted in 442 houses, of which 142 houses are qualified as tuberculous houses. Three deaths from cancer are noted in 51 houses, of which 25 are tuberculous houses, and 4 cancer deaths in 4 tuberculous houses, one of them being a convent. Other deaths from cancer occurring in convents and asylums may be set aside, as also 84 deaths in hospitals. They would only bear on the housing problem if the previous history of the patients was forthcoming. The point worth noticing which these records are already able to establish is that one-fifth of the deaths from cancer have taken place in houses that possess a sinister reputation for the prevalence of tuberculosis. Then, when there is more than one death from cancer in a set of houses, the proportion of tuberculous houses increased. Where there is but one death from cancer the proportion of tuberculous houses is one-sixth. Where there are two deaths from cancer the proportion of tuberculous houses is one-fourth. Where there are three deaths from cancer then half the houses are tuberculous. Finally, with four deaths from cancer in one house then all the houses are tuberculous. It would seem also that the confined life in convents and asylums for the aged favours the growth of cancer. Putting these institutions aside, and returning to ordinary dwelling-houses, during the course of two and a half years it has been found that among the houses where a death from cancer has taken place 10 per cent. of these houses have had more than one death to record from this disease. This, it may be said, is not yet conclusive; but when these observations have extended over several more years it seems from what we already see that some very useful deductions will be obtained.

The collection and verification of such figures is one of the services that a systematic record of the sanitary history of dwellings has rendered, and they justify an attempt on our part to follow and improve upon the example given by the sanitary administrative services of the city of Paris.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENT.)

New University Buildings.

AT a recent meeting the University Council authorised the building of new premises for the departments of physiology and of chemistry. The work was begun within three days and is now in progress. The site is a part of the grounds of the Blind Asylum, the purchase of which has been alluded to in previous letters, and the new buildings will be continuous with those already standing. They will cost £35,000, exclusive of furnishing, and will be so arranged as to permit of further extension should the occasion arise. One entrance from Woodland-road is provided for in the plans, and the University buildings will thus gain a double frontage. The plans for both departments have been most carefully prepared. Professor Stanley Kent has visited many of the corresponding continental institutions, and has, in company with the architect, Mr. G. H. Oatley, inspected the majority of the physiological departments of the United Kingdom. The chemical buildings will also constitute a very complete and up-to-date equipment, and Professor Francis is to be congratulated on so well deserved an outcome of his labours on behalf of his department. In the buildings of science, as well as of medicine, space is urgently needed, and this pressure will be greatly relieved by the migration of physiology and chemistry to their new quarters.

A Silver Mace.

The Council of the University has gratefully accepted the offer of Mr. Stanley H. Badock, late Sheriff of Bristol, to present a silver mace to the University.

The Medical School Dinner.

Until this year it has been the custom to open the winter session of the Bristol Medical School with a prize-giving ceremony in the afternoon followed by the dinner in the evening. This year, however, the prize distribution was dispensed with and the dinner was postponed from the beginning of the session to a later date. On Nov. 23rd over 100 past and present students, with the teaching staff, sat down to dinner at the Royal Hotel. The King's health was proposed by the President, Mr. C. K. C. Herapath, an old Bristol student and a practitioner of high repute in the city. The Vice-Chancellor, Sir Isambard Owen, in proposing the health of past and present students, expressed his delight at seeing so large a muster, and painted for his hearers a picture of the University of Bristol as he hopes it may be in the future, in words which suitably clothed large and inspiring ideas. Sir Isambard Owen laid special stress upon the fact that this is the day of opportunity for the provincial medical schools, a subject upon which his experience entitles him to speak with unique authority. His health was proposed in terms of "Welcome to Bristol" by Dr. D. S. Davies. The toast of "The Medical School and other Departments of the University" was entrusted to Dr. T. M. Carter, and that of "The President" to Mr. Charles Corfield. Some excellent songs helped to add gaiety to a very cheerful and successful occasion, and everyone present must have felt that the "arrival" of the University has given a new momentum to the progress of medical education in Bristol.

Phthisis in Bristol.

The inadequacy of the means at present in use in Bristol for the prevention of consumption and the treatment of consumptives has recently been forcibly stated by more than one member of the health committee of the municipal council. The chairman, Mr. Colston Wintle, at a meeting held on Nov. 16th, said that the 20 beds which are provided for by the city in the sanatorium at Winsley are quite inadequate even for the very carefully selected cases which are considered suitable for admission; while, in addition to those people who are in a condition to benefit by sanatorium treatment, there is a very much larger class of more or less advanced cases for whom no provision whatever exists, although these are the very people who inevitably act as disseminators of the disease. For such people Mr. Wintle would like to see some kind of colony system established. At the same meeting Mr. E. M. Dyer spoke of the necessity for compulsory notification as the basis of a successful campaign against phthisis.

The Bath Sewage Disposal Scheme.

The Bath Corporation recently applied to the Local Government Board for sanction to borrow £213,000 for sewage disposal works. The Board has now written stating that it approves the main principles of the scheme, but it will require some other additions to be carried out, including increased pumping plant.

Proposed New Sanitary District for Devonshire.

At the last meeting of the Axminster (Devon) rural district council a communication was read from the Local Government Board stating that it was of opinion that the suggestion that Honiton, Ottery St. Mary, Seaton, and Sidmouth urban district councils and the Axminster and Honiton rural district councils should combine and provide an isolation hospital and elect a medical officer of health, who should devote the whole of his time to the duties of the office, would be advantageous to all the districts concerned. The Local Government Board suggested a conference and said it would instruct a medical inspector to be present. After some discussion the council approved of the suggested conference and decided to send a representative. The proposed scheme has been generally favourably received, and recently a large number of ratepayers of Sidmouth signed a petition in its favour.

The Research Defence Society.

The annual meeting of the Devon branch of the Research Defence Society was recently held at Torquay, under the presidency of Dr. J. Harley Gough. There was a large attendance. The report showed that the branch had now 100 members. Sir J. E. Moss, Lord Fortescue, Admiral Sir W. Acland, Sir R. Lethbridge, Sir E. Satow, and Mr. Eden Philpotts wrote expressing regret at their inability to attend the meeting. Mr. Paul Swain gave an interesting address on "Some Recent Gains of Research by Experiments upon Animals."

The Royal Albert Hospital, Devonport.

The annual meeting of the working men's committee of the Royal Albert Hospital, Devonport, was recently held. The report stated that £280 would be available for the institution; this sum was £93 less than that raised in the preceding 12 months. The chairman said that the deficiency was principally due to a decrease in the receipts of the children's demonstration, but he considered they must be satisfied as there was so much unemployment in Devonport.

University of Bristol.

The sixth annual "Long Fox" lecture will be delivered in the Medical Library on Dec. 7th, at 3.45 P.M., by Professor E. Fawcett, the Dean of the Faculty of Medicine, who will take for his subject, "Some Researches in Embryology." The Vice-Chancellor will occupy the chair.

Nov. 30th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

University of Liverpool: New Pro-Chancellor.

Sir John Brunner was elected Pro-Chancellor of the University on Nov. 27th, in the room of the late Sir Edward Lawrence. He is well known in Liverpool as a devoted friend of education. Two chairs at the University owe their foundation to his munificence—the chair of Economics and that of Egyptology, and his advice is believed to have contributed largely to the prosperous financial position of the University.

Female Employment and Infant Mortality: Liverpool Inquiries.

A Home Office Departmental Commission, with the coöperation of the health committee of the Liverpool corporation, has been inquiring into an extremely important aspect of the industrial question—viz., as to the effect which the employment of women has upon infant mortality. The subject has been engaging the attention of the Home Office generally for some time, and a carefully conducted inquiry into the matter has been going on in Liverpool for a period of some 12 months. I understand that, notwithstanding the fact that the industrial employment of women is not common in Liverpool, some very valuable evidence has been collected by the health committee, which will be considered in due course, together with the results of inquiries elsewhere, and will lead, it is anticipated, to some very beneficial results.

Liverpool Royal Infirmary.

At a meeting of the election committee of the Royal Infirmary held on Nov. 25th under the presidency of Mr. Ralph Brocklebank, the chairman of the general committee, Dr. R. J. M. Buchanan, physician to out-patients and assistant physician to the hospital, was unanimously elected an honorary physician. Dr. Buchanan, who is also the professor of forensic medicine at the University of Liverpool, has had a distinguished career at the University Medical School.

Royal Southern Hospital.

The Lord Mayor of Liverpool paid a state visit to St. Paul's Church on Sunday, Nov. 28th, when the anniversary service on behalf of the funds of the Royal Southern Hospital took place. The Lord Mayor was accompanied by the Lady Mayoress and numerous members of the City Council. Representatives from the honorary medical staff and the committee of the hospital also attended the service. The collection realised £92.

Municipal Lunatic Asylums: Are they Needed?

The question has recently arisen as to whether it would not be cheaper for Liverpool to build her own lunatic asylums and maintain her own lunatics instead of discharging those duties in conjunction with the Lancashire Asylums Board, to which Liverpool representatives are sent by the city council. Under the present system the city council and the county council contribute to the cost of the five asylums on a defined basis. In a report on the subject, which contains statistics as to the relative cost of buildings and the maintenance of lunatics in other parts of the country, the town clerk says that the Lancashire asylums board has built the asylums cheaper in some cases than the municipalities who have had sole control of their own asylums; and the cost of maintenance in the Lancashire asylums is less than in the municipal asylums. If, therefore, the corporation of Liverpool were to build and equip its own asylums the cost per head would probably exceed that already incurred. The town clerk draws attention to the report of the Royal Commission on Local Taxation, 1901, in which it is stated that the Commissioners consider the maintenance of pauper lunatics and the provision of asylums (*inter alia*) to be services of a national character, and the Association of Municipal Corporations is making representations to the Government with a view to having the same paid for by the State. In these circumstances, the time is not opportune for making any change in existing arrangements. Last year the Liverpool ratepayers paid over £100,000 towards the cost of county asylums and the maintenance of lunatics; hence the question arose in the city council as to the expediency of Liverpool providing her own asylums.

Nov. 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Trinity College and the Royal University of Ireland.

OFFICIAL information has just been made public of the rules which embody the terms of admission of Royal University students and graduates as adopted by the board and council of Trinity College, Dublin. The terms practically mean that the University of Dublin is prepared to accept students of the late Royal University of Ireland according to their standing in that institution without passing any preliminary examinations, and, by a slight rearrangement as to fees, they can continue their education in Trinity College precisely as if they had been original students. Many will avail themselves of these generous terms.

Obituary: Andrew McConnell, L.R.C.P. & S. Edin.

I regret to record the death of one of the best known of the older Belfast practitioners—Mr. Andrew McConnell, who died at his residence, Belfast, at the advanced age of 71 years, on Nov. 16th, after a prolonged illness of six months' duration, during which he was confined to bed. A native of Doagh, co. Antrim, Mr. McConnell studied at Queen's College, Belfast, and in 1867 became a Licentiate of the Royal Colleges of Physicians and Surgeons of Edinburgh. He shortly afterwards began practice in Belfast; in 1867 he was house surgeon in the union infirmary, in 1869 he became a dispensary medical officer, and at a later period he was appointed visiting surgeon to the union infirmary, a position he resigned a few years ago on account of advancing years. He was an official in the medical service of the Poor-law board for a period of 32 years, and during all that time he discharged his duties with a zeal and conscientiousness worthy of all praise. In 1889–90 he was President of the Ulster Medical Society. He took no part in the public life of the city, being a man of a retiring habit, and thoroughly devoted to practice which, apart from his dispensary *clientèle* among the poor, was large. A devoted student of literature, he was a pleasant companion, and being gifted with a retentive memory he was shrewd and skilful in debate. In private life he was one of the most unassuming of men, and in his work amongst the poor, with whom he was first brought in contact in his professional capacity, he was invariably kind and considerate. Mr. McConnell is survived by his widow, one daughter, and two sons, both of whom are graduates of Trinity College, Dublin. He was buried in Broughshane, co. Antrim, on Nov. 19th.

Belfast Charity Organisation Society.

At the annual meeting of the Belfast Charity Organisation Society held on Nov. 29th attention was drawn in the report to the fact that the society has decided to adopt a scheme for the collection of subscriptions to the various charities, the association acting as the central agency. It is to come into force in next January. The principal medical charities, however, like the Royal Victoria Hospital and the Mater Infirmorum Hospital, have refused for various reasons to come in, so that the scheme is merely an experiment. Attention was also drawn in the report to the proposed reform of the Poor-law system, but many feel, so far as Ireland is concerned, tha enough attention has not been

drawn to the medical side of the question in that country in either the Minority or Majority reports. The amount spent by the Belfast Charity Organisation Society during the past year in relief of distressing cases was £475, as compared with £418 the previous year. More money is wanted both for the general expenses of the administration of the society and for relief of cases, but this unfortunately is now the condition of almost every philanthropic agency and, with increased demands, this state of affairs is unfortunately likely to be intensified.

Nov. 30th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Defence Union of Scotland.

THE seventh annual report of this society, the objects of which are to safeguard the interests of its members, to give legal advice, and to promote the interests of the profession generally, was presented at the annual meeting recently held at the offices of the Union, 155, St. Vincent-street, Glasgow. The report shows that the year ending August, 1909, was one of progress, and it is satisfactory to note that out of a large number of claims against members only a small proportion of actions at law ensued. The membership at the close of the year under review was 1189. The income for the year was £631 10*s.*, and the expenditure £337 7*s.*, leaving a balance of £294 odd. The expenditure amounted to only 53 per cent. of the income, and was equal to about 5*s.* 8*d.* per member. The report gives details of an insurance scheme against the risk of damages being awarded against members in connexion with their professional work. A premium of 6*s.* insures against £500 damages and costs, and 10*s.* against £3000 damages and costs. The entrance fee to the union is 10*s.*, and the annual subscription 10*s.*, but members of any English society having similar objects to the Scottish Union are admitted without entrance fee.

University of St. Andrews and the Proposed Changes in the Medical Curriculum.

A meeting of the University Court of St. Andrews was held on Nov. 20th when there was submitted the draft of a proposed ordinance for alteration of the regulations for graduation in medicine, which had been prepared by the Board of Studies in Medicine, and also by a conference of representatives of the Universities of St. Andrews, Glasgow, and Aberdeen. It was reported that the terms of the ordinance had been fixed by the conference after careful deliberation, so as to provide a basis of uniformity among the three universities in all the main provisions. The Court resolved to adopt the document as a draft ordinance, and resolved to communicate it to the Senatus Academicus and the general council of the University, and to invite the views of these bodies thereon, in conformity with the provisions of the Universities (Scotland) Act, 1889, as regards ordinances.

Forfarshire and the Prevention of Consumption.

At a meeting of representatives of the four district committees in Forfarshire, held in Arbroath on Nov. 20th, Dr. N. J. Sinclair, medical officer of health of the county, reported that the measures adopted last year for dealing with phthisis had been of great value. Since May last 14 deaths from phthisis had been notified—7 in Buchan, 4 in Forfar, 2 in Dundee, and 1 in Arbroath. For a period of 10 or 12 years back not more than five deaths had occurred in any year in the Arbroath district, which was practically free from phthisis. It was agreed that the lectures and other means adopted during the past year for the diminution of consumption should be continued.

Nov. 30th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Rotation of the Femur in the Treatment of Congenital Dislocation of the Hip-joint.

THE question of rotation of the femur in the treatment of congenital dislocation of the hip-joint was discussed by M. Le Damany at the recent congress of the French Surgical Association. He said that as congenital dislocation of the hip-joint had excessive torsion of the femur for its principal cause, rational treatment would, among other matters, include reverse rotation of this bone. The soundness of this view was shown by proofs of two kinds, mechanical and clinical. For the mechanical proof an apparatus was used to demonstrate the fact that under the given conditions reverse rotation was possible. The clinical proof was equally convincing, for the results obtained by this method in the treatment of children were far superior to those furnished by immobilisation in plaster splints.

Use of Colloidal Metals for the Prevention of Surgical Infections.

At the same congress of the Surgical Association M. M. Cazin said that during the last two years he systematically used colloidal metals in about a hundred cases for the prevention of surgical infections. Electrically prepared palladiol was the preparation which he preferred, with electrargol as the next best. He employed one of these substances whenever he encountered suppuration whilst operating—principally in cases of "cold" appendicitis and in suppurations of the adnexa. He also made use of them as prophylactics, not waiting for the occurrence of symptoms of general infection but commencing the treatment the day before an operation, when that was possible, or at least giving a first injection some hours beforehand. The doses to which he had recourse were much larger than those usually recommended. Patients who had been operated on and were in danger of infection might, in his opinion, have daily injections of 40 or 50 cubic centimetres, and even more, of either the palladiol or the electrargol without experiencing the slightest ill-effects. M. Victor Henri had shown that daily injections of 10 cubic centimetres of electrargol were harmless to rabbits, and M. Cazin had never observed any untoward result after injections repeated for several days in succession until the complete disappearance of the pyrexia. He had used the treatment in very severe suppurative conditions connected with the appendix and the Fallopian tubes. In 100 cases of abdominal surgery for septic lesions he had lost only one patient, a female whose general health was extremely bad and whose circumstances were such that she did not receive proper treatment after the operation.

Medical Diplomas in France.

During the last full academical year the number of diplomas of Doctor of Medicine granted by the French faculties of medicine in the several cities was as follows: Paris, 430; Bordeaux, 147; Lyons, 137; Montpellier, 102; Toulouse, 58; Lille, 46; and Nancy, 35. The Faculty of Medicine at Beyrouth in Syria, whose degrees are recognised by the French Government, granted 30 diplomas.

Treatment of Hydatid Cyst of the Liver.

At a meeting of the Surgical Society held on Nov. 17th, M. Quénu gave details of two cases of hydatid cyst of the liver which M. Dujarier had treated by extirpation after disinfection by formalin and in which union had been obtained by suturing. In the first case drainage was maintained for two days and recovery was uneventful. The second case was one of multiple cysts which were treated in the same way—namely, by "formalisation" and removal of the membranes belonging to the parent cyst, and suturing. The patient made a rapid recovery.

Nov. 30th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Another Italian Scourge.

MALARIA is on the wane, pellagra is following suit, but the "great sin of great cities" (or premature indulgence in the marital privilege) is on the increase, reinforced by yet another and hardly less deadly vice—alcoholism. Hooked on to the express train of the twentieth century, Italy is forging ahead "for better, for worse," in some respects distinctly for the latter. Like all southern nationalities she was wont to compare honourably with her transalpine sisters in the use of strong drink, but now she is rapidly descending from that "coign of vantage," and alcoholism, with its train of sinister sequelæ, is among the most formidable of the enemies, physical and social, with

which she has to cope. By every test which the anthropologist can apply, stunted development of mind and body becomes more and more common among her youth, and not a day too soon the best of her citizens are exerting themselves to track down the causes and replace them by conditions that make for health and manhood. The "Federazione Antialcoolista Italiana" and the "Lega Popolare Contro l'Alcoolismo" have been strenuously at work in this direction, and the statistics they have compiled in the course of their crusade more than justify their organisation and enterprise. Medical practitioners and consultants have joined "head and hand" with them and, as a result, the public are at length aroused to the prevalence of the evil and bringing pressure to bear on the authorities, municipal and imperial, to curb and conquer it. Some of the evidence contributed by physicians as to the increased resort to stimulants among the labouring classes seems impressive enough, particularly to all who can compare the Italy of last century with the Italy of to-day. In the Marches (writes a local practitioner) the peasant in the busy season drinks from 20 to 25 tumblers of wine per diem! Within the last quarter of a century the number of victims to "psicose alcooliche" (mental diseases from strong drink) have been "quadrupled." In the "manicomio" (madhouse) of Brescia the proportion of admissions for alcoholism was 37·1 per cent. for the past year. At the Thirteenth Congress of Medico-Psychologists held in Florence in 1907 Dr. Paolo Amaldi thrilled his audience with statistics equally startling; and Professor Antonini of Udine capped his *confrère's* returns with others of even graver import. The last-named expert added some details as to the causes of aggravated alcoholism in the Venetian population, among them being "the temporary emigration of the labouring classes during summer and their return in the winter months, having acquired drinking habits during their northern sojourn which stick to them throughout their idle spell." Worse still is the record of the urban population, especially in the great centres like Milan or Turin. In the former city, according to Dr. Angelo Arcelli, whose "inspection" comprised some 40,000 young pupils of both sexes, 83·50 per cent. are habitual consumers of "sostanze alcooliche" (articles of diet impregnated with alcohol), 44·22 per cent. drink "liquori" (vermouth and such like, also charged with alcohol), and 5 per cent. are sometimes drunk! Needless to add the testimony of their teachers that the young abstainers are quite the better behaved and the more intelligent, the wine or liquor drinkers being physically, intellectually, and morally quite inferior. The anti-alcohol crusade, conducted by the two associations—the "Federazione" and the "Lega" above referred to—has elicited important evidence as to personal habits and experience from prominent physicians and other "men of light and leading" throughout Italy. Two questions (first, Do you habitually take wine at or between meals; and second, Do you think alcoholic drinks, fermented or distilled, conducive to intellectual work or to "ispirazione geniale" (genial inspiration)?) have elicited from these authorities an expression of opinion that in some cases the moderate use of wine is salutary, while in others abstinence is the wiser course. Among the medical and biological authorities who represent the "moderate" side are such commanding names as Bianchi, De Giovanni, Morselli, Mosso, and Murri—Mosso maintaining that wine, sparingly consumed, is a sounder and more sustaining beverage for the worker than water, and certainly a preservative against many maladies. Historians like Villari and Ferrero are also believers in "moderation"—the latter (whose brilliant studies in Roman history are now familiar to the English-speaking world) going so far as to say that "he has always found at the bottom of a flask of champagne some idea, subsequently to be elaborated with patience and profit during hours of fasting." In other fields of mental energy—poetry, painting, sculpture—the evidence oscillates between "moderation" and abstention; while all the testators seem at one in holding that, to promote habits of strict sobriety among the less favoured classes, it would be well if the more favoured denied themselves even moderate indulgence in wine, were it only, by the force of example, to strengthen the hands of those who are labouring to wean young Italy from what is even now a "scourge" and may yet become a permanent and all-pervading source of national "decline and fall."

Nov 27th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Recent Epidemic of Poliomyelitis.

THE official report of the committee appointed for the study of the recent epidemic of poliomyelitis in Vienna was presented by Dr. Lappert at the last meeting of the Pædiatric Society of this city. It stated that 290 cases were reported upon, but that only 266 could be made use of in the report; it may also be remarked that 90 additional cases were observed after the report had been drawn up. Of the cases considered in the report 129 were from Vienna, and 137 from the surrounding districts. The epidemic commenced in July, 1908, and reached its climax in October. The ratio of girls to boys was as 72 to 100. The age was mostly between one and three years. Social position and density of population did not seem to have any influence. Of the 266 cases 241 showed the spinal type with paralysis of the legs, especially on the left side. Affections of the muscles of the back, the neck, or abdomen were noticed only rarely. In 14 cases, where the patients were older, a special feature of the disease was ascending and descending paralysis with death from involvement of the respiratory centre. Symptoms referred to the pons Varolii and medulla oblongata occurred in 25 cases. Mostly paralysis of the ocular muscles, of the facial nerve, and of the muscles of deglutition was seen in combination with the spinal type. These cases generally improved quickly. In some cases only the cranial nerves were affected. The encephalitic type with spastic hemiplegia was very rare. The so-called polyneuritic type could not be recognised as a special form. The meningitic type was without doubt also present, but could not be considered in the report as the observations were not reliable. The course of the disease was generally the following. A prodromal stage, lasting from one to four days, with pyrexia, sleeplessness, sore-throat, and gastric disturbances, was very often seen. From two to four days after the prodromal symptoms paralyses supervened, affecting different parts of the body, reaching their maximum after a few days and then diminishing to some extent. The temperature rarely reached 39° C. The statistics showed that 10 per cent. of the patients died and that 13·5 per cent. were reported recovered, but this figure will undoubtedly be added to. The other cases showed a persisting paralysis of one or more groups of muscles. In Vienna no connexion of cases could be discovered, the distribution being quite irregular, but the disease appeared in families and amongst neighbours, which suggests that it should be considered infectious.

A Case of Erythrocythæmia.

At a recent meeting of the Ophthalmological Society Dr. Krämer showed preparations obtained from a man who had suffered from morbus cæruleus congenitus. He was 19 years old and was said to have been always cyanotic. He was liable to slight asthmatic attacks and used often to spit up blood without pyrexia or any pulmonary symptoms being present. The visible mucous membranes were of a deep violet colour, whilst the face, nose, fingers, and ears were bluish-red. Systolic murmurs were heard all over the heart. The blood showed 6000 leucocytes and over 9,000,000 red corpuscles in the cubic millimetre. The conjunctiva of the tarsus was dark red. The lens and vitreous body were clear; the veins of the fundus were four times the size of those seen in a normal fundus; the visual acuity was 6/18. Both eyes had an identical appearance. The veins were nearly black and much curved; the arteries also were of a dark colour and twice their ordinary size. There were no extravasations of blood. The patient died suddenly with symptoms of internal hæmorrhages. The abnormalities found at the necropsy included narrowing of the pulmonary artery to the size of a lead pencil, a defect in the ventricular septum of the heart, a pervious condition of the foramen ovale, recent endocarditis, and an infarct of the lungs. As Dr. Krämer said, cases like this one were very rare, so that the ophthalmological conditions have as yet been little studied.

Eventful Career of a Medical Student.

A remarkable case came before the courts a few days ago when a medical student of more than ordinary ability was tried on a charge of forging banknotes. The evidence showed

that he had, before completing his curriculum, found out that there was a focus of tropical malaria on the outskirts of Vienna. The disease had, up to the time of his inquiries, been regarded as either typhoid fever or meningitis or simply "a fever"; he was the first to recognise its true nature and to urge on the authorities the necessity of making special efforts to extirpate it. The official sanitary bodies disbelieved his assertions; and the board of public health in the affected district ridiculed the student's researches, advising him to finish his studies first and afterwards to correct his ideas. A memorandum sent by him to the chief board of health was also without effect, although it was read there and approved. He therefore began to treat the patients according to the diagnosis he had arrived at by his researches, and, although unrecognised officially, he soon became known in the district as the malaria doctor who did wonders in restoring people to health. He neither asked for nor received money from the patients, who were, in fact, the poorest of the poor, and he himself was hardly able to procure the necessaries of life. Eventually he applied to the municipality for a grant, which was refused, and then, being in the direst necessity, nearly starving, he began to forge banknotes, as he was an expert photographer. When before the court he put forward the plea that the loss suffered by the State through his attempt at forging was more than compensated by the good which he had done in restoring to health so many otherwise incurable persons, and in the result he was acquitted by the jury on the ground that "irresistible coercion" had made him do what he did. Many bitter things were said in court against the official representatives of medicine, together with repeated references to the fate of Dr. Kolles, who in spite of his discovery of the value of cocaine in medicine had to leave Vienna a broken man, as well as to the fate of Semmelweis, whose immortal discovery of the cause of puerperal infection was treated in such a way that the discoverer's mind was permanently injured. Unlike them, however, this adventurous student has now met with sympathy and is out of danger as far as monetary interests are concerned.

Nov. 29th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Quinine Distribution.

IT is to be hoped that one result of the Malaria Conference at Simla will be a reduction in the prices charged for quinine made at the two Government factories at Darjeeling and in the Nilgiris. These prices should be strictly regulated by the rates in the open market, and there should be no attempt to show a profit merely for the sake of justifying the existence of the factories. Provincial administrations are ordered to obtain their supplies of drugs from the Government stores, and they very naturally resent the expenditure involved in the transactions, which becomes considerable when large quantities of quinine have to be purchased during epidemics of malaria. It should be possible to arrange a sliding-scale of prices which would follow those quoted by wholesale chemists. If there is a loss in the working of their factories, the Government of India should inquire into the methods of manufacture and take expert advice as to the possibility of improving the processes by which quinine is produced. The local government of Burma has issued an important resolution contained in a circular enumerating measures to come into force from Jan. 1st for the introduction of a revised system for the sale of, and free distribution of, quinine throughout the province. The Lieutenant-Governor of Burma has decided to increase the number of fixed centres for the sale of quinine in all bazaars throughout the province. For the areas which are not within easy reach of a post-office or bazaar it will be necessary to select headmen of village tracts to act as vendors. By these means it should be possible to put quinine within the reach of every inhabitant of the country. It will not be necessary to discontinue the sale of quinine through the agency of Government servants now acting as vendors, but their number should not be unduly increased so as to discourage the efforts of those who may conveniently be termed stationary vendors. To stimulate the sale the price of the drug will be lowered and the profit of the retail vendor increased. Free distribution will only be made (*a*) to those unable to purchase, (*b*) in outlying areas where there are no bazaars, post-offices, or headmen to act as vendors, and (*c*) in case of widespread outbreaks of malaria.

The St. John Ambulance Association.

The Indian branch of the association, with the authority of His Excellency the President, has just published a pamphlet giving full details of the work of the association in India. The pamphlet is divided into five chapters as follows: (1) The Order of St. John and its Associations with the Ambulance Movement; (2) the St. John Ambulance Association; (3) the Value of an Ambulance Training; (4) How to Organise Centres and Classes; (5) the St. John Ambulance Brigade. These chapters, as the titles indicate, contain full information with regard to the origin and development of the association and its Indian branch, the method of organising centres and classes and full details with regard to the issue of certificates, and the methods of obtaining ambulance stores and forming units of the St. John Ambulance Brigade. The syllabuses of the various courses of instruction controlled by the association are given in a sixth chapter, and as appendices are given the regulations for the next competition for the following:—1. The Indian Railway Challenge Shield, presented by H.R.H. the Grand Prior and the Chapter of the Order of St. John. This competition will be held at Jubbulpore on March 2nd, 1910. 2. The Volunteer Corps of India Challenge Shield, presented by H.R.H. the Grand Prior and the Chapter of St. John of Jerusalem in England. The date and place of this competition will be fixed by the Inspector-General of Volunteers in consultation with the corps concerned. 3. The first annual competition for the challenge cup, presented for competition amongst divisions of the St. John Ambulance Brigade, by Mr. Vivian Gabriel, C.V.O., to be held at Lahore on Dec. 27th, 1909. The pamphlets can be obtained free on application to the Honorary Secretary, St. John Ambulance Association, Indian Branch, Peshawar, or the Honorary Secretary, Executive Committee, Viceregal Lodge, Simla, or from Honorary Manager, Stores Depôt, Sassoon Institute Building, Bombay.

Health in Indian Jails.

The Sanitary Commissioner's note on mortality in jails recently issued shows that in 1908 all the conditions influencing the health of the prisoners were extraordinarily unfavourable. The south-west monsoon of 1907 receded prematurely and in consequence the spring crops of 1908 were bad everywhere excepting in Eastern Bengal and Assam and in Lower Burma, and although the autumn crops were generally good, except in Bengal, the epidemic of malarial fever which ravaged Upper India delayed the harvest. Poor and belated harvests raised the already high prices. High prices led to an increase of crime and the number of prisoners admitted into the prisons rose from 291,165 in the preceding year to 341,831, a total increase equal to 17 per cent. The increase was not, however, equally distributed. It was 50 per cent. in the Central Provinces, 28 per cent. in Bengal and the Punjab, and 26 per cent. in the United Provinces. Tubercle or diseases of the lungs, or both, levied a higher toll of death than usual. Not only were many of the prisons continuously overcrowded, but a large proportion of the newly admitted prisoners were in a bad state of health owing to the effects of scarcity and malaria infection. In India and Burma the mean daily prison population in 1908 was 101,336, compared with 93,264 in the previous year. In every 1000, 646 were admitted to hospital during the year, and 29 were constantly on the sick list, compared with 624 and 27 respectively in 1907. The death-rate, which in the previous five years ranged from 19·50 in 1903 to 17·61 in 1904, rose to 24·17, or 6·45 per 1000 more than in 1907. Every administration, except Bombay and the North-West Frontier Province, shared in the increased mortality; the most striking advances in the death-rate, compared with 1907, being from 16·94 to 31·61 per 1000 in Bengal; 18·79 to 29·80 in Madras; and 15·03 to 24·09 in the United Provinces. The average daily number of convicted prisoners in confinement was 94·262, and among them the death-rate was 24·32 per 1000, ranging from 31·96 in Eastern Bengal and Assam to 13·09 in Burma, the rates being under 20 per 1000 only in Burma, the North-West Frontier Province, and Bombay.

The Malaria Conference.

The subcommittee, consisting of Mr. R. Nathan, I.C.S., Colonel Thornbill, I.A., and Major L. Rogers, I.M.S., which on the recommendation of the Malaria Conference visited certain places in the Punjab in connexion with the malaria inquiry, has returned to Simla, where it will draw up its report.

Plague.

The returns for the week ending Oct. 23rd show that 4815 seizures and 3992 deaths from plague occurred throughout India during the week, both figures being slightly less than those for the previous seven days. The mortality in the different provinces was as follows: in Bombay Presidency, 1067 deaths; in Madras Presidency, 121; in Bengal, 50; in the United Provinces, 338; in the Punjab, 354; in Burma, 16; in the Central Provinces, 1142; in Mysore State, 161; in Central India, 364; and in Rajputana, 354. In Nagpur City the deaths for the week under report numbered 786.

Oct. 25th.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bologna:* Dr. A. Malagolli has been recognised as *privat-docent* of Pædiatry.—*Cagliari:* Dr. L. Trincas has been recognised as *privat-docent* of Bacteriology.—*Cordova (National University):* Dr. Benjamin Galindez has been appointed Professor of Descriptive Anatomy in succession to Dr. Luis M. Allende.—*Gratz:* Dr. Rudolf Müller has been appointed Extraordinary Professor of Pharmacognosis.—*Modena:* Dr. Carlo Aldo Massaglia has been recognised as *privat-docent* of General Pathology.—*Padua:* Dr. Enrico Opocher has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Palermo:* Dr. Franco Bommarito has been recognised as *privat-docent* of Urology.—*Parma:* Dr. Mario Varanini has been recognised as *privat-docent* of Internal Pathology.—*Philadelphia Medical College:* Dr. Philip Fischelis has been appointed Adjunct Professor of Histology and Dr. Herbert J. Smith Adjunct Professor of Therapeutics and Materia Medica.—*Prague (German University):* Dr. Wilhelm Wiechowski has been appointed Extraordinary Professor of Pharmacology, and Dr. Edmund Weil has been recognised as *privat-docent* of Hygiene.—*Rome:* Dr. G. Mari has been recognised as *privat-docent* of Internal Pathology, and Dr. V. Nicoletti as *privat-docent* of External Pathology.—*Sienna:* Dr. Vincenzo Beduschi has been recognised as *privat-docent* of Neurology and Psychiatry.—*Turin:* Dr. C. Tovo has been recognised as *privat-docent* of Forensic Medicine.

THE TREATMENT OF SCHOOL CHILDREN.—The Havant board of guardians has been recently corresponding with the Local Government Board upon the subject of the treatment of school children found to need medical attention and whose parents were unable to pay for the same, and the letter from the Local Government Board showed clearly that they were prepared to approve of boards of guardians making special arrangements for the treatment of these cases. The Havant board of guardians has now decided to use these powers and, with the approval of the Local Government Board, has fixed a fee of £2 for the operative treatment of cases of enlarged tonsils and adenoids by the district medical officer. Other boards of guardians may follow this lead and take advantage of the Poor-law medical service in order to deal with such defects among poor children.

THE BRITISH WHITE CROSS MILK COMPANY.—This company opened its factory at Knebworth on Nov. 20th by a ceremony which, on the invitation of the company, was attended by a large number of guests, including several well-known members of the profession. Lord Lytton, the chairman of the company, who presided at the luncheon, supported by many of the directors, explained the objects and methods of the company and proposed the toast of its success. After this had been supported briefly and suitably by other speakers the guests made a tour of inspection and had an opportunity of seeing the process at work. Later they were conveyed in motor-cars to Knebworth House, where they were received by the Chairman of the company and Lady Lytton. The objects of the company, stated very briefly, are to provide the public with a milk which shall be absolutely free from pathogenic germs and uniform in the proportion of its respective constituents while remaining altogether unimpaired in its nutritive and Calorie values by the process which ensures the attainment of these ends. At some future time we may have an opportunity of testing these claims, and shall then be in a position to advise our readers of their validity. In the meantime, it is safe to say that every precaution seems to be taken to prevent the contamination of the milk during the process of its preparation in the factory.

HOSPITAL SUNDAY FUND AT BRISTOL.—The annual meeting of the committee of this fund was held on Nov. 25th. The report stated that the fund for 1909 amounted to £1929, an increase of about £40 compared with 1908. The following grants were made: Royal Infirmary, £739; General Hospital, £620; Children's Hospital, £239; the other medical institutions received about £108. It was decided that Jan. 30th should be observed as Hospital Sunday for 1910, when a strong effort will be made to raise £2000.

THE METROPOLITAN HOSPITAL SUNDAY FUND.—A meeting of the Council of the Metropolitan Hospital Sunday Fund was held at the Mansion House on Nov. 30th under the presidency of the Lord Mayor. The report for the year 1909, which showed that the total collection amounted to £72,650, having been adopted by the Council, it was decided that the annual meeting of the constituents of the Fund should be held on Dec. 17th, and it was agreed that next Hospital Sunday should be held on June 12th, 1910. It was announced by the secretary that the Rev. Lionel Lewis had given notice that he would move at the annual meeting that the law of the constitution should be altered and that the Distribution Committee should be elected by the constituents.

THE EPILEPTIC COLONY OF THE LONDON COUNTY COUNCIL AT EPSOM.—Proposals for the extension of the epileptic colony at Epsom were submitted to the London County Council by the asylums committee on Nov. 30th. The committee asked that a scheme be sanctioned for the erection of two new villas for patients, a new central bath-room, and additional quarters for the staff at a total cost of approximately £12,760. In explaining why the proposed work was necessary the committee gave details as to the way in which the colony is carried on. It was opened in 1903 and had accommodation for 273 male and 60 female patients. These were all epileptics, but they were also certified lunatics, the colony being a county asylum established under the Lunacy Act, 1890. Two conditions were observed in the selection of colonists—their physical fitness to share in the labour (chiefly agricultural) carried on as part of the treatment, and the possibility of their being granted a measure of personal liberty within the colony grounds to an extent not possible in an ordinary asylum. This liberty, granted on parole, was a valued privilege at the colony. Originally patients sent to the colony were always selected from those who had been admitted in the first instance to some other asylum. Recently patients stated in the application form to be epileptic had been sent to the colony direct, and had been kept there for a time to ascertain whether they were fit for the special conditions of colony life, unsuitable cases being removed elsewhere. This practice, however, had only been possible to a limited extent owing to the lack of proper reception accommodation at the colony. The committee was satisfied that if the main features of the institution as a working colony were to be retained provision must be made for the reception of all acute recent male epileptic patients, from amongst whom suitable workers could be selected for retention, unsuitable cases being drafted elsewhere. An admission villa to accommodate 50 patients was necessary, and this extension on the male side would necessitate an increase in the number of chronic female epileptic workers (at present only 60) in order that the extra domestic and laundry work might be coped with. An extension of the staff block would also be necessary. The committee recommended the provision of a central bathroom because it would allow the head attendant or other responsible senior officer always to be present when bathing was going on. This was a matter of much importance, as at

present it was impossible, with bathing proceeding simultaneously in the different villas, to exercise a check upon any possible ill-treatment of patients, as shown by the presence of bruises. The provision of spray instead of slipper baths was recommended on the ground that economy in the use of coal would be effected. The whole cost of the work worked out at £151 a bed, which the finance committee regarded as a reasonable figure. The committee's recommendations were approved.

THE MIDDLESEX HOSPITAL.—At last week's meeting of the governors of the Middlesex Hospital Major-General Lord Cheylesmore, the chairman, in moving the adoption of the report, said that in spite of the exercise of rigid economy the ordinary maintenance expenditure had exceeded the revenue by £12,500, thus bringing the total deficit to £20,000, which had compelled the governors to go again to their bankers for a loan to meet their obligations. He appealed most earnestly to the public for further support for the institution. Part of a discretionary bequest of £5000 left by the late Lady Goldsmid was to be devoted to the endowment of two beds, one in the general wards, the other in the cancer wards, in memory of the testatrix, and the residue was to be applied to the general purposes of the cancer fund, or on behalf of the investigation department, as the board might determine. Mr. E. T. Hall had been chosen to prepare plans and superintend the erection of the new cancer buildings on a site abutting on the hospital premises, a long lease having been granted by Mr. Charles Berners, a member of the board, on very moderate terms. The board asked sanction to alter the laws of the hospital to provide for the creation of the office of assistant ophthalmic surgeon, the qualifications to be the same as those for ophthalmic surgeon. The motion for the adoption of the report was seconded by Mr. Reginald Lucas and carried unanimously.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY: PROPOSED INSURANCE AGAINST DAMAGES OR COSTS.—Dr. G. A. Heron, the treasurer and chairman of the council of the London and Counties Medical Protection Society, explained to the members of that society at a special general meeting held at 31, Craven-street, Strand, on Nov. 24th, the proposal of the council to arrange for an insurance of the members of the society against any damages or costs up to £2000, which might be awarded at any time against any member in any proceedings which the society might undertake on behalf of its members. For that purpose the subscription to the society would be raised to a sum not exceeding £1 per annum. Dr. Heron stated that the council desired to secure a form of assurance from an insurance company which would cover the risks of a member of the society as to costs and damages given against him in any trial at law in which his case was undertaken by the society, and in which he was unsuccessful, or which was settled either in or out of court. More than one proposal for the covering of these risks by insurance was in course of consideration by the council. Dr. Heron assured the members present that the council on their behalf would strictly guard their right to conduct the trial at law in the way the council might think proper. To secure that end the council would keep in their own hands the right to defend and to refuse or cease to defend, to settle and to decline to settle in or out of court any case submitted to the council by a member of the society. The proposed assurance would leave the members of the society exactly where they now stood with regard to the council of the society, but each member would have the comfort of knowing that he had a material sum assured to him with which costs and damages given against him in an unsuccessful action at law would be met. The sum to which each member would be entitled to look from his assurance against costs and damages given against him in an unsuccessful action at law would amount to at least £2000 in any one year, but the actual amount must be left to the council for final settlement. Dr. Major Greenwood contended that the plan would not have a good effect on medical men in their relation to the public; in fact, the proposed absolute insurance was bad for the public, for the medical profession, and for the society. After a long discussion the meeting passed a resolution approving the action of the council in arranging for an insurance of the nature proposed, the subscription to the society for that purpose to be raised to a sum not exceeding £1 per annum.

THE honorary membership of the Italian Society of Obstetrics and Gynæcology has been conferred on Dr. H. Macnaughton-Jones.

MEDICAL MAGISTRATE.—The deputy mayor of Rotherham, Mr. G. H. Lodge, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Justice of the Peace or the borough of Rotherham.

RICHARD MIDDLEMORE POST-GRADUATE LECTURES, BIRMINGHAM.—The annual lecture under this endowment will be delivered at the Birmingham and Midland Eye Hospital, by Mr. H. Eales, on Dec. 21st, at 5 P.M. The subject will be Myopia. All qualified members of the medical profession are invited to attend.

DISTRICT MEDICAL OFFICERS AND CONSULTATIONS.—At the last meeting of the St. Columb (Cornwall) board of guardians it was decided to apply to the Local Government Board for sanction for the payment of 1 guinea, being the fee for a consultant called in by one of the district medical officers for a parish patient.

COTTAGE BENEFIT NURSING ASSOCIATION.—The half-yearly general council meeting of this association will be held in Denison Hall, 296, Vauxhall Bridge-road, London, S.W., on Tuesday afternoon next, Dec. 7th, at 2.45 P.M., when the Hon. Sydney Holland will speak on "The State Registration of Nurses."

SOUTH DEVON AND EAST CORNWALL HOSPITAL.—As a result of the Hospital Sunday collection which took place in Plymouth on Oct. 24th the sum of £737 has been handed to the treasurer of the South Devon and East Cornwall Hospital. A sum of £551 has also been received as a result of the Hospital Saturday collections, which took place on July 17th.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the executive committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on Nov. 19th. There were present: Dr. F. de Havilland Hall, in the chair, Mr. J. Brindley James, Dr. J. Pickett, Dr. Frederick S. Palmer, Dr. F. C. Martley, Dr. M. Greenwood, Mr. F. S. Edwards, Dr. W. A. Dingle, Mr. E. Bartlett, Dr. F. J. Allan, Dr. W. G. Dickinson, Mr. J. F. Colyer, Dr. W. Knowsley Sibley, and Dr. J. B. Ball. The committee passed a resolution, expressing to Mrs. Clutton, widow of the late Mr. H. H. Clutton, for many years one of the treasurers of the society, their deep sense of the loss they have sustained by his death and their sympathy with her in her bereavement. A more than usually long list of sickness claims was considered, but, although numerous, the claims were for the most part of a light nature and of short duration. The financial results of the society's working are very satisfactory, and although the current year has still some weeks to run it is clear that when the books are closed in December a considerable addition will be found to have been made to the invested funds. Prospectuses and all particulars may be obtained on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery-lane, London, W.C.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. C. F. Larsen, a well-known Norwegian authority on tuberculous disease, in his eightieth year.—Dr. Axel Otto Lindfors, professor of midwifery and gynæcology in the University of Upsala.—Dr. Mayet, formerly professor of general pathology in the University of Lyons.—Dr. S. Bubnoff, professor of hygiene in the University of Moscow.—Dr. George E. Stubbs, formerly professor of surgery in the Medico-Chirurgical College, Philadelphia.—Dr. Manuel Beguerestain, surgeon and gynæcologist to the Rawson Hospital, Buenos Ayres.—Dr. Paul Fraisse, extraordinary professor of zoology in the University of Leipsic, whose researches in embryology are well known. He had been in bad health for several years, and had been allowed to discontinue lecturing since 1894. His age was 58 years, and he was a Doctor of Philosophy as well as of Medicine.—Dr. Johann Hermann Baas of Worms, aged 71 years. His

name is known in connexion with phonometry and with works on the history of medicine, one of which has been translated into English and published in New York.—Dr. Charles H. Cobb, professor of therapeutics and materia medica in the College of Physicians and Surgeons, Boston.—Dr. Pierre Merlon, French Ambassador in Peru.—Dr. Arturo Marini, a Genoa gynæcologist.—Dr. Fauvel of Havre, a well-known surgeon in that port.

OXFORD AND MEDICAL POOR-LAW RELIEF.—At a public meeting held at Oxford on Nov. 30th, under the auspices of the city branch of the Christian Social Union, a resolution was proposed asking the board of guardians to encourage sick persons unable to pay for medical attendance to apply for medical relief; and also asking the board to make it known that persons with families who have incomes under 22*s.* a week would not be required to repay the cost of the relief or appear before the board. The resolution was supported by a letter in its favour from Dr. W. Osler, Regius Professor of Medicine, and was carried *nem. con.*

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.—The autumn general meeting of this association was held on Nov. 24th at the Hotel Cecil, the President, Dr. F. A. de T. Mouillot, of Harrogate, being in the chair.—Amongst other members present were Sir Alfred Keogh, K.C.B. (President-elect), Sir Charles Cuffe, K.C.B., Dr. P. S. Abraham, Mr. T. Hobbs Crampton (chairman of council), Mr. M. Bulger, Dr. J. E. Macdonald, and the secretaries, Dr. W. Douglas, Mr. G. W. Dawson, and Mr. Campbell Boyd. After the meeting a banquet was held at which Lord MacDonnell, K.C.V.O., was the principal guest. In replying to the toast of "The Guests," he mentioned that he was very nearly being a member of the association himself, having whilst a student at Queen's College, Galway, prepared for the first examination in medicine. During his service in India his relations with members of the medical profession were always most cordial. He took particular pleasure in being present, as one of his brothers helped to found the association.

UNIVERSITY OF LONDON: MEETING OF THE MEDICAL FACULTY.—A meeting of the Medical Faculty was held at the University on Tuesday afternoon last, Nov. 30th, when, in the absence of the Dean, the chair was taken by Dr. F. H. Champneys, chairman of the Board of Advanced Medical Studies. There was no quorum, but two important reports from the committee were considered and amended. The first report had reference to the conduct of the work of the Faculty, and was as follows:—

Whilst considering the previous recommendations of the Faculty adopted on March 12th and 26th, 1909, to be the best arrangement for conducting the work of the Faculty, the committee recommend the adoption of the following resolutions:—

(*a*) That a committee of the Faculty be appointed which shall deal with matters referred to the Faculty and report thereon to the Faculty.

(*b*) That this committee be constituted as follows: (i.) The Dean of Faculty of Medicine, who shall be *ex officio* chairman of the Board. (ii.) The secretary of the Faculty of Medicine. (iii.) The chairman of the Boards of Studies in the following subjects: Preliminary Medical Studies, Intermediate Medical Studies, Advanced Medical Studies, Dentistry, Pharmacy (when appointed), Hygiene and Public Health, Physiology and Experimental Psychology, Human Anatomy and Morphology. (iv.) Two representatives of the Board of Preliminary Medical Studies to be appointed from the members of the Faculty by the Faculty after report from the Board in question. (v.) Two representatives of the Board of Intermediate Medical Studies to be appointed from the members of the Faculty by the Faculty after report from the Board in question. (vi.) Four representatives of the Board of Advanced Medical Studies to be appointed from the members of the Faculty by the Faculty after the report from the board in question. (vii.) Six members to be elected from the Faculty by the Faculty, each such member to be nominated by not less than two members of the Faculty. (viii.) The three representatives of the Faculty of Medicine on the Senate. (ix.) All members of the Faculty of Medicine not included in the foregoing categories who are also members of the Senate.

The second report of the committee concerned the various reports of the Boards of Studies which had been referred to it. The text of this report was circulated to the members of the Faculty of Medicine on Oct. 19th–22nd, 1909.

Without expressing any definite opinion on the details of the reports of the Boards of Studies, the Faculty consider that, in order to secure coördination among the medical schools and improve the efficiency of medical education in London, it is important that the control by the University over the medical schools be increased.

This can be effected by securing to the University the disposal of funds which it can apply for the maintenance of education and research in the London medical schools.

The Faculty also draw attention to the fact that, unlike many medical schools attached to universities, the medical schools of the London hospitals receive no grant-in-aid from the Treasury, and are almost entirely dependent on students' fees.

The Faculty recommend that the report of the special committee appointed by the Faculty in 1905, which report was adopted by the Faculty, should be reaffirmed.

Mr. H. J. Waring moved, and Dr. Norman Moore seconded, a resolution which was adopted unanimously, that this report, as amended, be forwarded to the Senate by authority of those present.

THE NATIONAL LEAGUE FOR PHYSICAL EDUCATION AND IMPROVEMENT.—The fourth annual general meeting of the league will be held at the Royal United Service Institution, Whitehall, S.W., on Dec. 9th, at 3.30 P.M., the Right Rev. the Lord Bishop of Ripon in the chair. Tickets may be obtained on application to the secretary of the league, 11, Southampton Row, London, W.C.

THE LONDON COUNTY COUNCIL AND PUBLIC ABATTOIRS.—The public health committee reported to the London County Council on Nov. 30th with reference to a request by the Local Government Board to be furnished with the observations of the Council on a memorial addressed to the Board as to the desirability of establishing public abattoirs in London. The question has been repeatedly postponed by the Council since 1898, when the committee recommended the establishment of public abattoirs. The committee now advised that, having regard to the fact that the Council had no statutory powers to provide public slaughter-houses and to the special circumstances of London and the numerous interests concerned, the Council should inform the Local Government Board that in its opinion a departmental committee should be appointed to inquire into the question of the establishment of public slaughter-houses in London as well as into the question of food inspection generally. The recommendation was approved.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Housing and Town Planning Bill.

THE Housing and Town Planning Bill has now reached the final form in which it will receive the Royal Assent. The points of difference between the Lords and the Commons have been compromised and adjusted, and on Thursday, Nov. 25th, the latter, at the instance of the President of the Local Government Board, gave their formal assent to the necessary amendments. Speaking on this occasion Mr. BURNS emphasised the importance of the irremoveability of the medical officer of health of a county (except with the consent of the Local Government Board) which the Bill secures. Lord ROBERT CECIL also expressed his satisfaction on this point.

The Oaths Bill.

The House of Commons has assented to the amendments made in the Oaths Bill by the House of Lords. It has since received the Royal Assent.

Asylums Officers' Superannuation Bill.

Many amendments were made by the House of Lords in the Asylums Officers' Superannuation Bill. The SPEAKER of the House of Commons ruled that about a third of them were privileged amendments inasmuch as they created a further public charge. However, on the explanation of Sir WILLIAM COLLINS that they were in furtherance of the objects of the Bill, the House waived its privilege, and assent was given to the amendments.

The Finance Bill.

The Marquis of LANSDOWNE'S motion hanging up the Finance Bill "until it has been submitted to the judgment of the country" has been carried by 350 votes to 75 in the House of Lords. The result of this will be a General Election in January.

HOUSE OF COMMONS.

THURSDAY, NOV. 25TH.

Discharged Lunatic Seamen.

Mr. FLYNN asked the Civil Lord of the Admiralty what practice was adopted by the Admiralty authorities in respect to lunatic seamen discharged from the Royal Navy; whether it was the custom to send these men to their relatives or to the workhouses of their native districts; if so, was the practice sanctioned by naval medical officers; and did the Admiralty authorities propose to continue the practice of deducting from the pension or other allowance given to discharged lunatic seamen now maintained in Irish lunatic asylums the capitation grant paid by the State towards their maintenance and transferring the amount of such grant to the relief of the vote for the Admiralty.—Mr. LAMBERT replied: The procedure of the Admiralty is governed by the Lunacy Acts, 1890–91, and by the provisions of the Army Act, Section 91, made applicable to the naval service by Section 3 of the Naval Enlistment Act, 1884. Dangerous lunatics are committed to an asylum, those entitled to pensions for life being admitted to the Royal Naval Hospital, Yarmouth. Non-dangerous lunatics are sent to Yarmouth or to the union of the parish to which it appears from the declaration made on entry and

from other information that they are chargeable, unless their relations or friends are willing to take charge of them and the Admiralty is satisfied that proper care will be taken of them. In the latter case the Admiralty acts on the advice of the naval medical authorities. With regard to the last part of the question, the reduction of the pension by the amount of the grant received by the asylum authorities from the Local Taxation Account in aid of the pensioner's maintenance is made in accordance with the provisions of Section 7, Clause 2, of the Superannuation Act of 1887, and the Admiralty has no option in the matter.

Territorial Medical Officers in London.

Captain FABER asked the Secretary of State for War whether he would state whether there was a senior Territorial medical officer in London suitable to take command of No. 1 London General Hospital.—Mr. HALDANE answered: This general hospital is formed by the staff of St. Bartholomew's Hospital. The senior physician asked that Colonel Harrison, a distinguished medical officer who had been in the Grenadier Guards, should be appointed administrator, and he was accordingly gazetted on Nov. 2nd.

Royal Army (Territorial) Medical Corps Transport.

Sir SAMUEL SCOTT asked the Secretary of State for War whether he could give any date upon which the re-issue of harness to the Royal Army Medical Corps Transport of the Territorial Army would be completed; and what steps were being taken in the interim to admit of the men receiving the necessary training with wagons.—Mr. HALDANE replied: Orders were issued on Nov. 12th for the re-issue of the harness that had been withdrawn.

The Health of the Troops in Malta.

Answering Mr. LUPTON, Mr. HALDANE said: During recent years improvements have been steadily carried out in relation to the drainage of the harbours in Malta. In 1906 a considerable number of the troops were transferred from St. Elmo to the new barracks. The Mediterranean Fever Commission, however, obtained no evidence connecting the condition of the harbours with the prevalence of Mediterranean fever amongst the troops. Since the prohibition of the use of goat's milk in barracks and hospitals Mediterranean fever has practically disappeared from amongst the troops. The evidence given in the reports of the Royal Society's Mediterranean Fever Commission connecting goat's milk and Mediterranean fever is so strong and the improvement in the health of the troops since the use of goat's milk has been given up is so marked that no responsible Minister who did not wish to be regarded as weak and incompetent would venture to remove the prohibition of the use of goat's milk by the garrison.

Hemel Hempstead Union Infirmary.

Mr. TALBOT asked the President of the Local Government Board whether his attention had been called to the recent death of a patient in the infirmary of the Hemel Hempstead union, which formed the subject of an inquiry before the coroner; whether he proposed to take any action with regard to the management of that workhouse, especially as regards the treatment of the sick poor; and whether he could hold out any expectation of the issue of a General Order to ensure the appointment of trained nurses in all workhouse infirmaries.—Mr. BURNS wrote in reply: My attention has been called to the case referred to. I deeply regret the occurrence and I have fully informed myself with regard to the circumstances connected with it. I am giving consideration to the management of the sick wards of the workhouse in question, and I am in communication with the guardians on the subject. With regard to the last part of the question, I may point out that under the orders at present in force provision is made for the appointment of one or more nurses of experience in every workhouse.

WEDNESDAY, DEC. 1ST.

Sleeping Sickness in Nyasaland.

Mr. REES asked the Under Secretary of State for the Colonies whether an authenticated case of sleeping sickness occurred in the native hospital of the Church of Scotland Mission in Nyasaland last September; and whether he was aware that the existence of other cases was suspected.—Colonel SEELY replied: Two natives suffering from sleeping sickness were admitted to the Blantyre Mission Hospital on June 8th and August 14th respectively. The first patient died in July and the second, who came from Portuguese territory, died in September. The natives of Nyasaland are being systematically examined for sleeping sickness. Up to Sept. 30th four cases had been discovered, but there is no reason to suppose that infected persons are numerous in the Protectorate.

Carbon-Monoxide Gas Fatality.

Mr. GEORGE ROBERTS asked the Secretary of State for the Home Department whether his attention had been directed to the recent case in which a workman was found dead and another unconscious at the Winnington (Northwich) chemical works; whether these men had been overcome by carbon-monoxide gas; and, if so, whether he would further consider the advisability of scheduling affection by this gas as a dangerous disease under the Workmen's Compensation Act.—Mr. GLADSTONE replied: I have obtained a report with regard to the circumstances of this case, from which it appeared that the men were suddenly overcome by carbon-monoxide gas while cleaning out a cylinder in a tower used for washing residual gases. The case, therefore, appears to be one, not of disease, but of accident, to which the provisions of the Workman's Compensation Act are already applicable. It was announced at the inquest on behalf of the employers that full compensation would be paid.

BOOKS, ETC., RECEIVED.

ALCAN, FÉLIX, Paris.

Physiologie. Travaux du Laboratoire de M. Charles Richet, Professeur à la Faculté de Médecine de Paris. Tome sixième. Anaphylaxie- Alimentation- Toxicologie. Price Fr. 12.

BAILLIÈRE, TINDALL, AND COX, London.

Aids to Microscopic Diagnosis. (Bacterial and Parasitic Diseases.) By Ernest Blake Knox, B.A., M.D. (Dubl. Univ.), D.P.H. (Honours), R.C.P.I. Price, cloth, 2*s.* 6*d.* net; paper, 2*s.* net.

Surgical Anatomy. By John A. C. Macewen, B.Sc. in Anatomy and Physiology with Honours, M.B., C.M., with Honours, F.F.P.S. Price 7*s.* 6*d.* net.

BALE (JOHN), SONS AND DANIELSSON, LIMITED, London.

Tropical Medicine and Hygiene. By C. W. Daniels, M.B. Cantab., M.R.C.P. Lond., and E. Wilkinson, F.R.C.S. Eng., D.P.H., D.T.M. & H. Camb., Major, I.M.S. In three Parts. Part I. Diseases due to Protozoa. Price 7*s.* 6*d.* net.

BUTTERWORTH AND CO., London.

The Law Relating to Poisons and Pharmacy. With Notes and Cases. By W. S. Glyn-Jones, of the Middle Temple and South-Eastern Circuit, Barrister-at-Law. Price not stated.

COBLENTZ, OSCAR, Berlin.

Die topische Diagnose der chronischen Gonorrhoe und der anderen bakteriellen Infektionen in den Harn- und Geschlechts-organen des Mannes. Zugleich ein Beitrag zur Pathologie und Bakteriologie der Gonorrhoe des Mannes. Von Dr. Rudolf Picker. Price M.1.60.

CURRIE, JOHN, Edinburgh.

Medical Examination Questions set at the University of Edinburgh, Royal College of Physicians, Edinburgh, Royal College of Surgeons, Edinburgh, Faculty of Physicians and Surgeons of Glasgow and the University of Glasgow for Several Years. 1909. Price 1*s.* 6*d.* net; post free, 1*s.* 9*d.*

Questions set at the Fellowship Examination of the Royal College of Surgeons, Edinburgh. Price 1*s.* net.

FISCHER, GUSTAV, Jena.

Sammlung Anatomischer und Physiologischer Vorträge und Aufsätze. Herausgegeben von Prof. Dr. E. Gaupp und Prof. Dr. W. Nagel. Heft 5. Der Physiologische Stoffaustausch zwischen Blut und Geweben. Von Leon Asher. Price M.1.20.

Heft 6. Die Ortsfremden Epithel Gewebe des Menschen. Untersuchungen und Betrachtungen von Dr. Herm. Schridde. Price M.1.60.

Lehrbuch der Klinischen Diagnostik Innerer Krankheiten. Herausgegeben von Prof. Dr. Paul Krause. Price, paper, M.14.; bound, M.16.

FROWDE, HENRY, AND HODDER AND STOUGHTON, London.

Oxford Medical Publications. A System of Operative Surgery. By various Authors. Edited by F. F. Burghard, M.S. Lond., F.R.C.S. Eng. In four Volumes. Vol. III. Price, 36*s.* net per volume, or £6 net per set of four volumes. (Volumes I., II., and IV. published previously.)

HIRSCHWALD, AUGUST, Berlin.

Die Massage und ihre wissenschaftliche Begründung. Neue und alte Forschungsergebnisse auf dem Gebiete der Massagewirkung. Von Sanitätsrat Dr. med. Carl Rosenthal, Berlin. Price M.3.60.

LEHMANN, J. F., München.

Rotters Typische Operationen. Kompendium der Chirurgischen Operationslehre. 3. Auflage. Herausgegeben von Dr. Alfred Schönwerth. Price M.8.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

Charles Darwin and the Origin of Species. Addresses, &c., in America and England in the Year of the two Anniversaries. By Edward Bagnall Poulton, D.Sc., M.A., Hon. LL.D. Princeton, F.R.S., V.P.L.S., F.Z.S., F.G.S., F.E.S. Published Nov. 24th, 1909, being the Fiftieth Anniversary of the Publication of "The Origin of Species." Price 7*s.* 6*d.* net.

Beasts and Men. Being Carl Hagenbeck's Experiences for Half a Century among Wild Animals. An abridged Translation by Hugh S. R. Elliot and A. G. Thacker, A.R.C.S. Lond. With an Introduction by P. Chalmers Mitchell, M.A., D.Sc., LL.D., F.R.S. Price 12*s.* 6*d.* net.

MARHOLD, CARL, Halle-a.-S.

Klinik für psychische und nervöse Krankheiten. Herausgegeben von Robert Sommer, Dr. med. et phil. IV. Band. 3. Heft. Preis pro Band, M.12.

NASH, EVELEIGH, London.

Home Exercises for Health and Strength. By Filip Sylvan, M.D. Berlin. Price 2*s.* 6*d.* net.

POINAT, A., Paris.

Culture in Vitro des Cellules Cancéreuses. Par Marie Bra. Price Fr.5.

ROUSSET, JULES, Paris.

Que faut-il manger? Manuel d'Alimentation Rationnelle. Par le Dr. F. X. Gouraud, Ancien Chef de Laboratoire à la Faculté. Préface du Pr. Armand Gautier. Price Fr.3.50.

RUDALL, CARTE, AND CO., London.

The Professional Pocket Book or Daily and Hourly Engagement Diary for 1910. Price not stated.

SAMPSON LOW, MARSTON, AND CO., LIMITED, London.

A Beautiful Arm. A History of the Vaccination Delusion. By Amos Booth (of Leicester). With an Appreciation of Mr. Booth's Work by F. G. Stevens (of Leicester). Price 2*s.* net.

TAYLOR AND FRANCIS, London.

Appendix XXII. to the Second Edition of the Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons of England. By Samuel G. Shattock, Pathological Curator of the Museum. Price not stated.

UNWIN, T. FISHER, London and Leipsic.

Monthly Gleanings in a Scottish Garden. By L. H. Soutar. With a Coloured Frontispiece by S. J. Ogilvie and twenty-four half-tone illustrations by J. Collier Brown. Price 6*s.* net.

VOGEL, F. C. W., Leipzig.

Archiv für Experimentelle Pathologie und Pharmakologie. Redigirt von Dr. B. Naunyn und Dr. O. Schmedeberg. Einundsechzigsten Bandes, Viertes bis Sechstes Heft. Price not stated.

WHITE CROSS LEAGUE, London.

The Falling Birth-rate and its Significance. Notes Compiled by Lieut.-Col. H. Everitt, R.M.A. (retired), Hon. Secretary, White Cross League. Price 6d.

WITHERBY AND CO., London.

Wanderings Among South Sea Savages and in Borneo and the Philippines. By H. Wilfrid Walker, F.R.G.S. With 48 Plates from photographs by the Author and Others. Price 7s. 6d. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BLATHWAYT, ARTHUR DE VISME, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Anæsthetist at the Royal United Hospital, Bath.

BOND, FRANCIS THOMAS, M.D. Lond., M.R.C.S., F.R.S. Edin., has been re-appointed Medical Officer of Health for the South Gloucestershire Combined Sanitary District.

BOOTH, N., M.B., Ch.B. Vict., has been appointed Senior House Surgeon to the Manchester Royal Infirmary.

FRASER, MARK S., M.B., Ch.B., D.P.H., F.R.C.S. Edin., has been appointed House Surgeon at the Paddington Green Children's Hospital.

JEFFERSON, G., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon at the Manchester Royal Infirmary.

LEE, SEPTIMUS, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Medical Officer to the Wye House Asylum, Buxton.

MCMUTRIE, A. C. B., M.B., Ch.B., D.P.H., F.R.C.S. Edin., has been appointed House Physician at the Paddington Green Children's Hospital.

MEGGS, T. H. E., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Slough District of the county of Buckingham.

MORRIS, E., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Donington District of the county of Lincoln.

NICHOLLS, G. E. E., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

PLATT, H., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Manchester Royal Infirmary.

POPPLE, T. M., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Manchester Royal Infirmary.

PRICE, FREDERICK W., M.D. Edin., M.R.C.P. Lond., has been appointed Physician to the Great Northern Central Hospital.

RAMSBOTTOM, A., M.D., M.R.C.P., has been re-appointed Assistant Medical Officer to the Manchester Royal Infirmary.

SMALLEY, A. A., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

TATTERSALL, N., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

WILLIAMS, GWYNNE, M.S. Lond., F.R.C.S. Eng., has been appointed Surgical Registrar to University College Hospital, London.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road Birkenhead.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum and fees.

CARDIFF INFIRMARY (GENERAL HOSPITAL).—House Surgeon for the Ophthalmic and Ear and Throat Departments for six months. Salary £30, with board and residence.

CHARTHAM, KENT COUNTY ASYLUM.—Third Assistant Medical Officer. Salary £145 per annum, with board, quarters, attendance, and washing.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Physician. Salary £80 per annum, with board, residence, and washing.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with apartments, board, &c.

DUBLIN, DR. STEEVENS' HOSPITAL.—Anæsthetist.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Medical Officer for six months. Salary at rate of £100 per annum, with luncheon and tea.

ENFIELD AND EDMONTON ISOLATION HOSPITAL, Winchmore Hill.—Resident Assistant Medical Officer. Salary at rate of £150 per annum, with rooms, rations, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and laundry.

HANLEY EDUCATION COMMITTEE.—School Medical Officer (female). Salary £250 per annum.

HARROGATE, BOROUGH OF.—Medical Officer of Health and Medical Inspector of School Children. Salary £400 per annum and expenses out of pocket.

HAYWARD'S HEATH, BRIGHTON COUNTY BOROUGH ASYLUM.—Third Assistant Medical Officer for six months. Salary 12 guineas a month, with board, residence, &c.

HEMEL HEMPSTEAD, WEST HERTS HOSPITAL.—House Surgeon. Salary £100 per annum, with rooms, board, and washing.

HÔPITAL FRANÇAIS, 172, Shaftesbury-avenue, W.C.—Resident Medical Officer, unmarried. Salary £50 per annum, with full board.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician. Also Assistant Resident Medical Officer. Salary £100 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Resident Medical Superintendent, House Surgeon, Assistant Casualty Medical Officer, and Ophthalmic Surgeon.

HUDDERSFIELD INFIRMARY.—Senior Assistant House Surgeon. Also Junior House Surgeon. Salaries £80 and £60 per annum respectively, with board, residence, and washing.

HUNTINGDON COUNTY HOSPITAL.—House Surgeon. Salary £80, with board, lodging, and laundry.

INDIAN MEDICAL SERVICE, India Office, London.—Thirteen Commissions in His Majesty's Indian Medical Service.

KINCARDINESHIRE COUNTY COMMITTEE ON SECONDARY EDUCATION.—Assistant School Medical Officer. Salary £250 per annum, with necessary outlays.

LANARK COUNTY COUNCIL.—Assistant Medical Officer of Health. Salary £170 per annum, with travelling expenses.

LISTER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea-gardens, S.W.—Senior Assistant in the Bio-Chemical Department. Salary £350 per annum.

LIVERPOOL INFIRMARY FOR CHILDREN.—Resident House Surgeon. Also Resident House Physician. Salaries at rate of £80 per annum with board and lodging.

LIVERPOOL ROYAL INFIRMARY.—Honorary Assistant Physician.

LONDON HOSPITAL, Whitechapel, E.—Anæsthetist.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Fourth House Surgeon for six months. Salary £25, with board and residence.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Dental Surgeon.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood.—House Physician. Salary £75 per annum, with board, residence, &c.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Resident Medical Officer, also Junior House Physician. Salaries £100 and £50 per annum respectively, with board and residence.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Physician for six months. Salary at rate of £60 per annum, with board, residence, and laundry.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Surgical Registrar, Clinical Assistants, Junior Obstetric Assistant (females).

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Curator and Librarian. Salary at rate of £120 per annum, with lunch.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Junior Resident Medical Officer. Salary at rate of £40 per annum, with board and washing.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Surgeon.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Surgeon. Also Assistant House Physician. Salary £50 per annum each, with board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—Assistant House Physician. Salary £60 per annum, with board and residence.

SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, attendance, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary at rate of £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Rugeley, in the county of Stafford; and at Ballylesson, in the county of Down.

THE Secretary of State for the Home Department gives notice of a vacancy as Medical Referee under the Workmen's Compensation Act, 1906, for the Sheriffdom of Renfrew and Bute, more particularly to the Paisley District of the Sheriffdom.

Births, Marriages, and Deaths.

BIRTHS.

BRADDON.—On Nov. 26th, at London-road, Thornton Heath, Surrey, the wife of William V. Braddon, M.B., B.C. Cantab., of a daughter.

BRENAN.—On Nov. 30th, at Fairholm, Chislehurst, the wife of A. R. M. Brenan, M.D. Cantab., of a son.

HYSLOP.—On Nov. 26th, at Castle Hill House, Settle, Yorkshire, the wife of Dr. B. S. Hyslop, of a son.

MARRIAGES.

GRENFELL—MACCLANAHAN.—On Nov. 18th, at Chicago, Illinois, Wilfred Thomason Grenfell, Superintendent of Royal National Mission to Deep Sea Fishermen, C.M.G., and M.D. Oxon., to Anna MacClanahan, only daughter of Mrs. Edmund B. B. MacClanahan, of Chicago and Lake Forest, Ill., U.S.A.

DEATHS.

CLARK.—On Nov. 28th, after an operation for appendicitis, Mildred Mary Christie, the loved wife of Percy J. Clark, M.R.C.S., L.S.A., of 2, Spital-square, Bishopsgate, E., aged 43. Cremated at Golder's Green.

FARRANT.—At Avon Villa, Hillingdon, Uxbridge, Mark Farrant, M.R.C.S., L.R.C.P., D.P.H., aged 38 years.

GUNN.—On Nov. 29th, at Hindhead, Robert Marcus Gunn, F.R.C.S., late of 54, Queen Ann-street, W., aged 59 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

NATIONAL PURE FOOD ASSOCIATION.

A MEETING, convened by the recently formed National Pure Food Association, was held at 20, Hanover-square, London, W., on Nov. 30th, under the chairmanship of the President, Mr. F. E. Smith, K.C., M.P., who explained the objects of the association to a small gathering of "pure food" campaigners. In strong contrast with Mr. Smith's guarded statements was the tone of some of the other speakers. Mr. Smith was careful to explain that the majority of traders were above reproach, and that, compared with those shopkeepers to whom it would be repugnant to supply adulterated food, the exceptions were inconsiderable. On the other hand, Canon Horsley left the impression on the audience that the sale of adulterated food was alarmingly prevalent, and he expressed the belief that the reason why the Sale of Food and Drugs Acts was not properly administered in some districts was that too many shopkeepers were members of local authorities. In referring to traders who sell sophisticated food he used the expressions "liars, thieves, and murderers." As not unusually happens when enthusiastic laymen discuss professional subjects, many exaggerated statements were made during the evening, but the exact facts were furnished by Colonel C. E. Cassall and others. Colonel Cassall pointed out that if authoritative standards for foods were set up, these standards would necessarily have to be low, and that by no form of repressive legislation would it be possible to secure a food-supply of high quality. Two resolutions were proposed and adopted. These resolutions urged upon the Government the desirability of appointing a Royal Commission to inquire into the question of food adulteration, with especial reference to the use of chemical preservatives and to the desirability of setting up a food standard of purity by Act of Parliament. The terms of the resolutions were somewhat complicated, and set forth, among other things, that the "recent exposures concerning food frauds afford data whereby the amount yielded may not unreasonably be computed at a minimum of one penny per day per person, which amounts to the colossal sum of £66,000,000 per annum." This sort of calculation serves no purpose.

AN ETHICAL QUESTION.

A CORRESPONDENT writes:—

> A advertises a part of his practice for sale, and is in negotiation with B and C as purchasers. C buys it and a little later B wishes to know if he has a right to start in practice in the same town (population about 120,000), or is he debarred from doing so by having received information confidentially from A?

We feel strongly that B should not start in practice in the same town.

MARAT ON MIND AND BODY.

IT is pretty generally forgotten that Jean Paul Marat, the notorious revolutionist, attained to considerable eminence as a physician and scientific writer before plunging into the vortex of politics, from which he did not emerge. His earliest and one of his best-known books was published by him in England in 1773, under the title "A Philosophical Essay on Man: Being an Attempt to Investigate the Principles and Laws of the Reciprocal Influence of the Soul and Body." The book, as Mr. Morse Stephens has pointed out, "shows a wonderful knowledge of English, French, German, Italian, and Spanish philosophers." It is directed against Helvetius, who scoffingly declared in his "L'Esprit" that a knowledge of science was unnecessary for a philosopher. In the "Essay on Man" Marat declared that "Physiology alone can solve the problems of the connexion between soul and body, and proposes the existence of a nervous fluid as the true solution." His work was in fact what would now be called "materialistic." It is curious to find Marat, whom many have regarded as a monster of cruelty during the First French Revolution, writing, when still a young and polished man of the world and of science, "Observations on the Manner in which Organisation Renders Man Obdurate and Cruel, Compassionate and Humane." If, says Marat, the soul be "united to gross organs, or to fibres too solid or too lax," it "becomes obdurate and inflexible; when united to organs delicate, elastic, and vigorous, it becomes compassionate and tender. Hence pity, although an artificial sentiment, is nevertheless, in every individual, modified by the organisation. The greater the sensibility of man, he may thence be the more humane; and by a very singular consequence, he may thence be the more cruel." A man, for instance, very solicitous for his own well-being, will be apt to regard those who threaten it with extreme hatred and will seek their ruin. "Let us therefore conclude, that the more sensible a man is, the more he is obnoxious to hatred, his cruelty is greater, and the more atrocious his character."

Marat was himself a conspicuous instance of the interaction of mind and body. In May, 1792, he returned from England, whither political persecution had driven him, and was compelled to hide in cellars and in sewers, like the characters in Hugo's "Les Misérables." Living the life of a human rat, this once fashionable medical man contracted a horrible skin disease, or developed the later symptoms of lues, and suffered physical agony for some three years, until stabbed by Charlotte Corday in July, 1793, when in his bath. In the bath he wrote the ferocious articles in his paper, the *Ami du Peuple*, and here for a time he escaped the worst of his pains; but there can be little doubt that much of his ferocity, his suspicion, and his abnormal hatred of his enemies was due to maddening physical irritation and the knowledge of approaching death.

HEALTH OF THE STRAITS SETTLEMENTS.

ACCORDING to the annual report, just presented to Parliament, of the Governor of the Straits Settlements, Sir John Anderson, G.C.M.G., the present estimated population of the colony is 628,016. The death-rate in 1908 was 43·06 per 1000 of the population, as against 39·07 in 1907. The birth-rate in 1908 was 28·75 per 1000, as compared with 26·11 in 1907. There were 12 deaths from small-pox, 178 from cholera, and 12 from plague. The stringent quarantine regulations and the vigilance of the medical and municipal authorities have hitherto prevented these scourges from finding a permanent home in the colony. Of other important specific diseases beri-beri accounted for 1900 deaths and phthisis for 2988, as against 1626 and 2820 respectively in 1907. In spite of the high death-rate, the climate in the towns and in the country which has long been opened up cannot be considered unhealthy for Europeans, who, if they take ordinary precautions, can, with their higher and more sanitary mode of life, to a great extent avoid the malarial and other tropical fevers and dysentery which attack the Oriental inhabitants of the peninsula. Practically all the hospitals of the colony are under Government management and those maintained on estates are under Government supervision. The number of patients treated in the hospitals in 1908 was 32,805, of whom 974 were Europeans. In 1907 the corresponding numbers were 28,708 and 1193 respectively. Deaths numbered 3869 (62 being Europeans), as against 3688 and 74 in 1907. The rate of mortality was thus 11·8 per cent. of the total treated, as against 12·85 per cent. in the previous year. 417 persons remained in the colonial leper asylums at the end of the year, as compared with 389 on Dec. 31st, 1907. 118 deaths occurred, as against 135.

THE HOME TREATMENT OF TUBERCULOSIS.

AT the Tuberculosis Exhibition held last week at the Chelsea Town Hall a series of popular lectures have been very well attended by the public. The subject dealt with on Saturday was "The Patient's Part in the Continuation of Sanatorium Treatment at Home." Sir James Crichton-Browne, the chairman, on introducing the lecturer (Mr. Stanley Bates) remarked that there could be no doubt that sanatorium treatment was frequently unjustly discredited from the fact that the patients on leaving, too abruptly resumed their occupations and former mode of life. In his opinion, a period of rigid hygienic discipline was always advisable after the departure of the patient from the sanatorium. It was with this period of transition that the lecturer would deal, recounting his own experiences as a patient. The chairman added that Mr. Bates had the approval of high authority for the open-air shelter he had devised and for the means he advocated for the successful continuance of sanatorium treatment under medical instruction. Mr. Bates, after emphasising the need for such medical supervision and advice, and the necessity of regarding his observations as those of a layman, treated his subject in a practical manner, illustrating his remarks with references to patients discharged from Frimley Sanatorium and with lantern slides demonstrating his own experiences.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

ROYAL SOCIETY OF MEDICINE, 20, Hanover-square, W.

TUESDAY.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION (Hon. Secretaries—J. Gray Duncanson, H. Charles Cameron): at 4.30 P.M.

Dr. Reginald G. Hann and Dr. R. A. Veale: A Fatal Case of Poisoning by Phosphorus taken as an Abortifacient, with Unusual Subcutaneous Hæmorrhages.

Discussion:

On the Therapeutic Value of the Lactic Acid Bacillus, to be opened by Dr. Herschell. Dr. Haberson, Dr. Eyre, Dr. R. Hutchison, Dr. Goodbody, Dr. Vaughan Harley, and Dr. C. W. Miller, will take part.

PATHOLOGICAL SECTION (Hon. Secretaries—L. S. Dudgeon, C. Bolton) at Cancer Research Laboratory, Middlesex Hospital, W.: at 8.30 P.M.

Communications:

Mr. Hastings, Mr. MacCormac, and Mr. Woodman: The Histology of Secondary Carcinomatous Nodules treated with Pitchblende (radium).

Mr. J. Bland-Sutton: Osteosarcoma of Breast.

Dr. H. A. Colwell: (1) Catalase; (2) Autolysis of the Tissues of Malignant and Non-malignant Subjects.

Dr. H. Beckton: Altmann's Granules as a Test for Malignancy or Non-malignancy.

Dr. J. C. Mottram: A New Method of Estimating K and Na in Tissues, with Observations in Malignant and Non-malignant Cases.

Mr. Bryden Glendining: The Spread of Carcinoma by the Fallopian Tube.
Miss Helen Chambers: A New Method of Studying Chemiotaxis.
Demonstrations:
Dr. Lazarus-Barlow: Skotographs.
Mr. Pearce Gould: A Forearm removed for X Ray Dermatitis and Carcinoma.
Mr. Somerville Hastings: The Effect of Testicular and Ovarian Extracts on the Development of Ascaridean Ova.
Dr. Beckton: Altmann's Granules in the Embryo.
Dr. Mottram: On the Existence in Tissues of Substance which Desensitises a Photographic Plate.

WEDNESDAY.
BALNEOLOGICAL AND CLIMATOLOGICAL SECTION (Hon. Secretaries—Septimus Sunderland, F. A. de T. Mouillot): at 5.30 P.M.
Papers:
Dr. Clippingdale: The Chiltern Hills.
Dr. Mahomed: Atmospheric Electricity.

THURSDAY.
NEUROLOGICAL SECTION (Hon. Secretaries—E. Farquhar Buzzard, Wilfred Harris): at 4.30 P.M.
Clinical Meeting:
Cases will be shown illustrative of Syphilis of the Nervous System (excluding Tabes and G.P.I.).
Cases:
Dr. James Taylor: (1) Recurrent Left-sided Convulsions, with Transient Motor Aphasia, in a Left-handed Woman; (2) Left Hemiplegia, with Left Third Nerve Paralysis, in a Woman, with Nodes on Forehead and Corneal Opacities.
Dr. Wilfred Harris: Two Cases of Chronic Syphilitic Poliomyelitis of the Upper Extremities.
And other Cases.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—William J. Gow, G. F. Blacker): at 7.45 P.M.
Specimens:
Miss L. Garrett Anderson: Adeno-carcinoma of the Ovary.
Mr. J. Barris: A Tumour of the Uterus of Doubtful Nature.
Dr. Walter Tate: (1) A Case of Myxofibroma of the Ovary Removed under Spinal Anæsthesia; (2) Primary Carcinoma of the Fallopian Tube.
Dr. Clifford White: Quadruplets.
Dr. J. Abernethy Willett: Quadruplets.
Mr. H. J. Paterson: (1) Double Tuberculous Pyosalpinx; (2) A New Apparatus for Continuous Proctoclysis.
Dr. H. R. Spencer: Cæsarean Section and Hyterectomy for Fibroids with Degeneration of Uterine Muscle.
Short Communications:
Dr. Philip D. Turner: Abdominal Hysterectomy 63 Hours after Labour for a Necrosed and Suppurating Subperitoneal Fibroid.
Dr. A. H. Lewers: Note on a Case of Cystic Tumour of the Right Broad Ligament springing from the Uterus and apparently Developed from Gärtner's Duct.

FRIDAY.
CLINICAL SECTION (Hon. Secretaries: H. D. Rolleston, M.D., Albert Carless, M.S.): at 8.30 P.M.
Cases:
Mr. Herbert J. Paterson: Case of Gumma of the Breast Simulating Malignant Disease.
Mr. John R. Lunn: A Case of Acromegaly.
Dr. Milne (introduced by Mr. Carless): (1) An Acromegalic Giant; (2) Two Cases of Achondroplasia.
Dr. McMullen (introduced by Dr. Rolleston): A Case of Adiposis Dolorosa.
Dr. Herringham: (1) A Case of Aneurysm (?) in a Young Woman resembling that exhibited by Dr. McNalty last meeting; (2) Rheumatoid Arthritis in a Boy with Albuminuria and Enlargement of Glands, Liver, and Spleen.
Mr. A. Carless: Removal of Large Stone (856 grains) from the Ureter.
Mr. W. G. Spencer: Case of Trephining for General Epilepsy (3 Years after).
Mr. J. D. Malcolm: Case of Cholecyst-duodenostomy for Acute Emaciation.
Dr. Poynton: Congenital Œdema in Mother and Child associated with Cardiac Defec .

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W.
WEDNESDAY.—8.30 P.M., Fleet-Surgeon F. H. A. Clayton, R.N.: Notes on Seven-day Fever of Eastern Ports—its Occurrence in the Navy and its Relationship to Dengue.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.
WEDNESDAY.—8.30 P.M., Mr. E. H. Fenwick: Surgical Aspects o Kidney Disease.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos-street, Cavendish-square, W.
THURSDAY.—8 P.M., Card Specimens by Mr. S. Stephenson, Mr. N. B. Harman, and others. Delaration of the Poll of the Society *re* Amalgamation. 8.30 P.M., Mr. R. W. Doyne: (1) Description of a Form of Conjunctivitis; (2) A Note on Family Choroiditis (with patient); (3) A Note on Myopic Degeneration of the Lens (with patient); (4) Note on a Form of Iritis.—Mr. M. S. Mayou: Congenital Sarcoma of the Orbit.—Mr. A. P. L. Wells and Mr. M. S. Mayou: A Round-celled Sarcoma of the Lacrymal Gland.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY, Board Room of the Great Northern Central Hospital, Holloway-road, N.
THURSDAY.—Mr. E. H. Shaw: Pathological Demonstration.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne-street, Edgware-road, W.
THURSDAY.—8.30 P.M., Dr. W. H. Dolamore: Pyorrhœa Alveolaris.—Dr. A. Fleming: The Specific Treatment by Inoculation of Infective Conditions of the Mouth.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.
FRIDAY.—5 P.M., Mr. F. R. Cross: The Brain Structures concerned in Vision and the Visual Field. (Bradshaw Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.
MONDAY.—4 P.M., Dr. W. Evans: Clinique (Skin). 5.15 P.M., Lecture:—Dr. D. Ferrier: The Etiology and Treatment of Tabes.
TUESDAY.—4 P.M., Dr. L. Guthrie: Clinique (Medical). 5.15 P.M., Lecture:—Mr. A. Carless: Some Fractures about the Wrist Joint (with lantern illustrations).
WEDNESDAY.—4 P.M., Mr. E. Corner: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. G. Pernet.
THURSDAY.—4 P.M., Sir Jonathan Hutchinson: Clinique (Surgical). 5.15 P.M., Lecture:—Prof. W. Thorburn (Manchester): Some Points in the Surgery of the Biliary Passages.
FRIDAY.—4 P.M., Mr. V. Cargill: Clinique (Eye). 5.15 P.M., Dr. E F. Bashford: Some Result of the Comparative Biological and Experimental Study of Cancer.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.
MONDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eyes. 2.30 P.M., Operations. 5 P.M., Lecture:—Mr. Bidwell: Practical Surgery.
TUESDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. R. Jones: The Treatment of Mental Cases by the General Practitioner.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Diseases of the Throat, Nose, and Ear. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. B. Harman: Diseases of the Eyes. 2.30 P.M., Operations. Dr. Robinson: Diseases of Women. 5 P.M., Lecture:—Dr. Low: Prophylaxis of Tropical Diseases.
THURSDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eyes. 2.30 P.M., Operations. 5 P.M., Lecture:—Mr. R. Lloyd: Anæsthetics.
FRIDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. Medical Registrar: Demonstration of Cases in the Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. S. Taylor: Pneumonia.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Mr. B. Harman: Diseases of the Eyes. Dr. Davis: Diseases of the Throat, Nose, and Ear. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. 2.30 P.M., Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.
MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. Carless: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Dr. R. Wells: Some Points in Cardiac Pathology.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.30 P.M. Dr. G. Rankin: Paralysis in Children in some of its Clinical Aspects.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. H. Evans), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson). 4.30 P.M., Medical In-patient (Dr. A. J. Whiting).
TUESDAY.—Clinic: 10 A.M., Medical Out-patient (Dr. A. G Auld). 2.30 P.M., Operations. Clinics:—Surgical (Mr. W. Edmunds); Gynæcological (Dr. A. E. Giles). 4.30 P.M., Lecture:—Dr. A. de Prenderville: The Status Lymphaticus and some Other Anæsthetic Dangers.
WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. H. Pirie).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture:—Dr. A. J. Whiting: Exophthalmic Goitre.
FRIDAY.—10 A.M., Clinic:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

HOSPITAL FOR SICK CHILDREN (UNIVERSITY OF LONDON), Great Ormond-street, W.C.
THURSDAY.—4 P.M., Lecture (Surgical):—Mr. Lane: Some Abdominal Conditions.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

MONDAY.—4 P.M., Lecture: Sir Victor Horsley: Surgical Diagnosis and Treatment of Diseases of the Nervous System.
TUESDAY.—3.30 P.M., Clinical Lecture: Dr. J. Collier: Cerebral Syphilis.
FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. A. Turner: Muscular Atrophy.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck-street, W

MONDAY.—3 P.M., Clinical Demonstration: Dr. H. Campbell.
TUESDAY.—5 P.M., Clinical Demonstration:—Dr. J. Mackenzie.
WEDNESDAY.—3 P.M., Clinical Demonstration:—Dr. F. Palmer.
THURSDAY.—3 P.M., Clinical Demonstration:—Dr. T. D. Savill.
FRIDAY.—2 P.M., Clinical Demonstration:—Dr. P. Stewart. 5.30 P.M., Clinical Demonstration: Dr. E. Macnamara.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Fungous Diseases of the Skin—I., Tinea Circinata; II., Tinea Imbricata; III., Tinea Versicolor; IV., Erythrasma; V., Actinomycosis; VI., Madura Foot.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College 2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan 9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, (9 A.M., Major, 2 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.) Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor 9 A.M., Major, 2 P.M.).

SATURDAY (11th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 2nd, 1909.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 26	30·17	S.W.	...	47	45	34	36	38	Foggy
,, 27	30·06	S.W.	...	74	46	38	39	41	Overcast
,, 28	29·84	S.W.	.	59	53	41	48	48	Raining
,, 29	29·51	S.W.	0·04	56	54	48	51	52	Raining
,, 30	29·36	S.W.	0·33	70	49	42	41	42	Fine
Dec. 1	29·35	S.W.		49	49	41	42	44	Overcast
,, 2	29·39	W.	0·22	52	46	42	41	43	Cloudy

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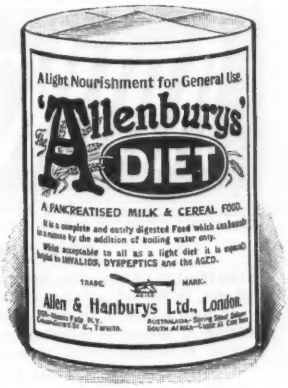

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